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Charlotte Medical Journal.

A SOUTHERN JOURNAL OF MEDICINE AND SURGERY.

VOLUME 70
NUMBER 1

Charlotte, N. C., July, 1914.

\$1.50
PER ANNUM.

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ELIXIR OF ENZYMES is a palatable preparation of the proteolytic and curdling ferments. It is recommended as a gastric tonic generally and especially in correcting faulty proteid metabolism. Elixir of Enzymes is an excellent adjuvant and vehicle for exhibiting iodids, bromids, salicylates and morphin. One dram of Elixir of Enzymes will dissolve 46 grains of potassium iodid, 45 grains of sodium salicylate and 17 grains of potassium bromid.

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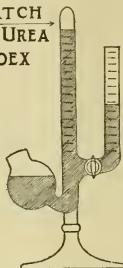
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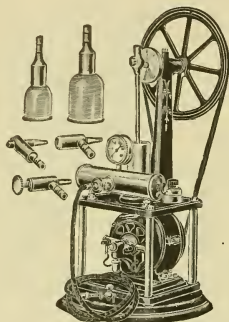
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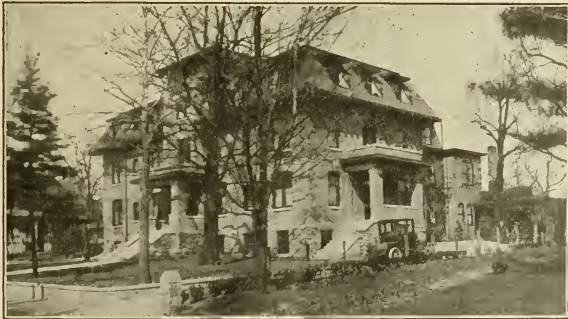
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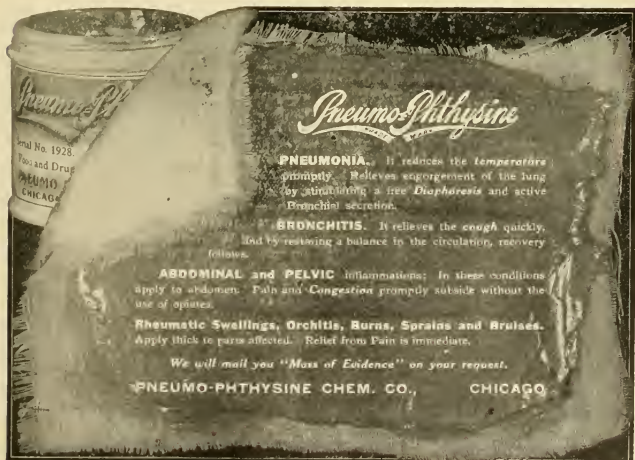
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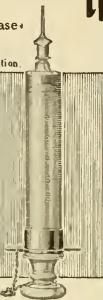
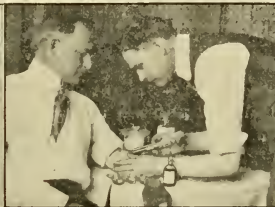
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The Charlotte Medical Journal

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CHARLOTTE, N. C., JULY, 1914.

No. 1.

President's Address Before the North Carolina Medical Society.

By James M. Parrott, M. D., Kinston, N. C.

In obedience to the mandates of our by-laws, and in accordance with the usages of our organization, it becomes my duty to submit the President's annual address. The year now drawing to a close has witnessed the broadening of the scope of doctors' work and has crystallized many of our rather indefinite ideas into life's realities.

The usefulness of any organization is measured by the objects which call it into existence and the manner in which its duties are performed. Modern life with its practical conception has made it clear that the duties of the physicians, either individually or collectively, are three-fold. First, his relations to the public; second, his relations to the profession as a profession and, third, his relations to his confreres. Humanity's demand for improvements determines our professional attitude towards public matters as well as private affairs, and in response to this, our sect has become at once progressively aggressive in its relation to the public and the public welfare. As a profession, as well as individually, we are greatly interested in the work of our public institutions, and especially those that are under the control of physicians, or which have been established for mental or physical relief.

In his unusually able address before this society at Hendersonville Dr. A. A. Kent, in a masterly manner called your attention to the desirability of closer relations with other organizations. I beg to suggest that his wise advice be followed more closely than has been done. We can extend the sphere of our usefulness to the people of our state by sending our representatives to other bodies primarily to proclaim public sanitation and private health.

We point with pride to the four classes of state hospitals which have been founded for the deaf, dumb and blind, the insane, the feeble-minded and those suffering with tuberculosis. While we, as an organization, have no legal relation to them, the causes which produce the diseases or defectiveness which make these institutions necessary emphasize our responsibilities to them.

Deaf, Dumb, and Blind:—Nothing appeals to us more than the deaf, dumb and blind. Many of these cases may be preven-

ted. In this work doctors have a high and sacred duty to perform. I sincerely hope that increased attention will be paid to the prophylaxis of deafness, dumbness, and blindness. Remember the little ones, gentlemen, and increase, please, your diligence in preserving the special senses. To cure is splendid; to prevent is Godlike. I hope our annual gatherings will be attended regularly by all the superintendents of the state institutions for the unfortunates of whatever class or race. Frequently Mr. John A. Ray, the unusually able and much loved superintendent of the blind institution at Raleigh attends our gatherings much to our pleasure and profit. We appreciate his visits.

Tuberculosis Sanatorium:—The tuberculosis sanatorium at Montrose already has done a great deal of good in spite of its rather checkered career. It is well located and in time will prove of inestimable benefit to our people. It is now in much better shape than ever before. It is under the immediate care of the Board of Health, and has at its head as superintendent one of the ablest health men in the South, Dr. L. B. McBrayer. Dr. McBrayer has had a broad experience in sanitary work, and is especially well equipped to discharge the manifold and irksome duties of his office. The tuberculosis work in North Carolina is in good hands now. I congratulate the State Board of Health and the state at large on Dr. McBrayer's selection.

It is high time to take the progressive steps projected by the Board of Health in dealing with tuberculosis. It is a disease which is frequently acute, most often chronic and always degenerative. The educational value of the state institution will prove to be very great. No one can over estimate the good to be accomplished by properly training the tuberculous how to live. If for no other reason, this feature of the tuberculosis institution will more than repay all the money which has been, or will be, spent on it. We do not, however, have to depend on this feature of the work alone to justify its existence. We have every reason to believe that ours will soon equal, in smaller proportions only, the work done by older and larger sanatoriums for this disease, and we can in all fairness expect equally good results. From its beginning to a recent year, Gaylord Farm Sanatorium had cost \$278,000.00 and the patients who had been restored to health

there had earned \$706,000.00 and have a capacity appraised at two and a half millions. These figures are at once striking and convincing.

Practically one death in nine is due to tuberculosis. Its death rate equals that from typhoid fever, scarlet fever, smallpox, diphtheria, cancer, diabetes, appendicitis and meningitis. There are approximately 500,000 sick from it all the time. 50 per cent of the deaths from it occur during the prime of life, the money and time spent in preparation for life's work then availing nothing. It brings sorrow and poverty, and frequently leaves children wards of the state, or mayhaps preys for degeneracy, crime and prostitutes.

By education and otherwise, the death rate from tuberculosis has been reduced from 200 in 1900 to 149 in 1912. The state has made no mistake in erecting the institution for this disease; on the contrary, it is the highest evidence of constructive statesmanship. Its care has been committed to the medical profession, and happily will we bear the burden, and proudly will we meet our obligation. With confidence I appeal to the profession for its hearty response and support.

Feeble Minded:—The School for the Feeble Minded is about to open. It is ideally located with healthful surroundings, and all the natural advantages which the heart can desire. It will begin under the direction of Dr. C. Banks McNairy, who comes to his work highly endorsed and with such prospects of success as to inspire the confidence of those of us who have met him. I am sure he will prove worthy of the high trust which has been imposed in him. With the coming of this institution another ideal has been crystallized and another responsibility has been placed on the medical profession and manfully will we meet this added duty. The institution bids fair to prove an unusual blessing. It will fill a long felt want, and will serve to reduce the burden of many an all but crushed heart. The defective children appeal to us and their helplessness is a call to us to service. We will study with renewed diligence the cause of child defectiveness, and the methods of preventing the same.

We have no exact data as yet as to the number, or percentage of increase of this class of unfortunates in North Carolina. The fact that in Minnesota the population increased 59.7-10 per cent from 1884 to 1904, and feeble mindedness 380 per cent is indeed startling. There is no doubt in my mind but that the state is amply justified in creating this institution. We are doing too little for our defective children. The United States government annually spends

fourteen or fifteen million dollars teaching how to treat the soil, and cattle, and horses, and hogs; it ought to be impressed with the importance of spending something in teaching how to raise good men. We must remember that we are largely what our ancestors made us and, therefore, we must be cautious lest our children will think the less of us. While I shall not discuss eugenics or eugenics. I will call your attention to the fact that this generation can say in a large measure whether those that come after shall be more or less criminals, mentally defectives, or physically wrecks.

Insane Asylum:—Our profession is, as is the case with the deaf, dumb and blind institution, very much interested in our hospitals for the insane, and especially so in the causes of insanity. Mental derangement is a very serious matter economically, as well as socially. It is now costing the state of North Carolina nearly one half million dollars annually to care for the insane in the state institutions. The cost of maintenance is increasing at about 4% per annum. There are 3,100 inmates, and about 500 out of the hospitals who ought to be in the institutions. This estimate includes epileptics and certain other mental defectives. Insanity is increasing the nation over at a rate of about 5 per cent. We have every reason to believe that conditions in North Carolina are about the same as in every other state. It is not only interesting, but a matter of vast importance, to note that the best authorities claim that 50 per cent, or one half of the cases of insanity, can be prevented even with our present knowledge of its causes. The physician has to do with diseases which cause mental derangements such as general paresis, and he can wield a great deal of influence for good in checking many of the causes such as social vices and the use of alcohol, which produce a vast number of cases of insanity.

During the recent winter, there was organized at Raleigh a Mental Hygiene Congress largely through the efforts of the distinguished Superintendent of the Central Hospital, Dr. Albert Anderson. The purpose of this organization is to educate the public as to the causes of insanity, and thus to check its inroads. This organization has started under the most favorable and propitious circumstances, and I feel justified in giving special emphasis to its work.

Before leaving this subject, I feel that I should direct your attention to the fact that the early recognition of cases of insanity is a matter of very great importance. 80 per cent of the cures occur in those cases which are recognized and for which treatment is

begun during the first year. I beg to call your special attention to the work which Dr. Pendleton is doing at the Central Hospital at Raleigh in research work, and in studying the causes of insanity from a pathological standpoint as exhibited by the individual. While we have made great improvements in the handling and treatment of cases of insanity, yet we are not doing in North Carolina all that should be done in my judgment. Certainly those in authority are accomplishing everything that could be expected of them under the circumstances and with the funds at hand. In my opinion, the trouble is due really to the attitude of the public to insanity. Most every one thinks that it is incurable, and that the best that can be done for the poor unfortunate is to make him or her as comfortable as circumstances will permit until death comes to the rescue. This attitude is an erroneous one. I believe that more cases of insanity should be cured than are being cured, and I believe that an appropriation of more money on the part of the state to our institutions will show a marked increase in the percentage of cures. The public must be brought to realize the fact that in order to obtain the best results, more money must be appropriated. If we simply propose to conduct our state hospitals as detention camps, then we are doing as well as any body can expect. For my part, however, I believe that more effort should be made to cure. In view of these remarks I should reiterate, and I know whereof I speak, that the superintendents, their assistants and nurses of our state institutions are wise, cautious men, and are diligent in the discharge of their duties. I believe that the medical profession can do North Carolina a great deal of good, by supporting the Mental Hygiene Congress and otherwise impressing upon the public the desirability of increased study not only as to causes of insanity, but the problem of curing as well. In this connection, I desire to especially commend the action of the Directors of the Central Hospital at Raleigh in instituting a pathological department. This work, I am sure, will count for much in restoring these poor afflicted to their mental health.

School Hygiene:—We are just beginning to realize the value of School Hygiene. In one city a recent examination showed that 42 per cent of the children had defective teeth, 28 per cent defective tonsils, 18 per cent with defective eyes, 13 per cent mouth breathers, 8 per cent adenoids, and 8 per cent with enlarged glands. It is estimated by good authority that 34 per cent of the school children of Baltimore are "repeaters," due to physical defects. A large

part of 1-3 of the money which is thus being wasted could be saved. This is a valuable consideration from an economic standpoint. However, this is its least value. Think what it would mean if the physical defects of these children were removed. Of course, there is only one practical way to handle this question, and that is to have compulsory inspection of the school children. It is high time that the public was being educated along this line. The enumeration of the various sanitary defects in school children would be almost a classification of all the diseases to which the human flesh is heir. The simple suggestion as to the transmission of tuberculosis, measles, whooping cough, scarlet fever, et cetera, in the school room and on the playground is sufficient to impress any thinking man with the desirability of improved school hygiene. It is a well established fact that defective children in the open air with very favorable sanitary surroundings, though working one half of the time of the other children, show really more marked advancement than the healthier ones. While, of course, so far as the open air per se is concerned, it is not as important in North Carolina as it is in the larger cities because of the poorer construction of our school rooms, admitting as they do, volumes of fresh air all the while, it indicates the very great value of school hygiene and what can be done by intelligent school hygiene towards increasing the effectiveness of school work, and decreasing the number of diseases transmitted at the school house. I recommend the appointment of a Committee to give this matter consideration, and to report its findings and such recommendations as it may deem wise to make to the Society at its next annual meeting.

Oral Hygiene:—Up to the present time, North Carolina has not paid the attention to oral hygiene which the subject deserves. A very high authority suggests that the next great step in preventive medicine devolves upon the dentists. I have not the temerity to dispute this. I am sure that the question of dental hygiene is a very important one. We must stand for it to relieve suffering, to improve the digestive capacity, as well as the beautification of the race. Statistics show that it requires children with bad teeth six months longer to complete the elementary school course than those with good teeth. Sound good teeth means frequently, yea more frequently than we think, a sound good man. Dentists should be able to assist us in studying this phase of hygiene. A closer relation, for this as well as for other reasons, should exist between doctors and dentists than now exists. Such a relation can but re-

sult in good to both professions, and will further oral hygiene to a marked degree. I advise that a Committee of five be appointed to report at the next meeting, instructed to investigate this entire matter and to make such recommendations as it may deem advisable.

Nurses' Homes:—On an occasion, when returning from a victorious campaign, a noted general was being showered with praise and congratulations. Said he, in reply, after thanking them for their compliments, "The credit is not due so much to me as it is to my lieutenants, and not so much as 'tis to the men behind the guns," "for," said he "however well laid my plans might have been, had they not been promptly and courageously carried out, they would have come to naught." Often, after a long fight with an attack of typhoid or other serious illness, I have thought when the suggestion was made that I had done well that perhaps it was not so much in my plans, however well laid they may have been, as it was to the capable and faithful nurse who carried out my commands through the long campaign. The doctor owes a great deal to the nurse, and I pause here to pay my tribute to the nursing fraternity. Nursing must be recognized as a profession of the highest and noblest order. I not not think that the nursing laws in North Carolina are as stringents as they should be from an idealistic standpoint. No doubt they will be improved as soon as practical. In the meantime, a very serious duty devolves upon the doctors in assisting the nursing profession, and in helping those who are making a strenuous effort to do so, to raise the standard of nursing in North Carolina. I feel that I cannot say too much in behalf of these noble women. I regret that in this, my annual address, I have not the time to give the subject of our relations, duties and responsibilities the consideration which the importance of the subject demands. Before I pass from this topic, I wish to call your attention to the Nurses' Home for those who have tuberculosis, built near Black Mountain. The institution is known as Dunnwyche, named for two noble women who have so much endeared themselves to the public and to their co-workers. At this home nurses receive attention at really less than cost. We must remember that most of the nurses are poor girls, and the construction of this institution was born of the noblest purpose, namely, to assist those who could not help themselves. As I understand it, this nurses' home until now has struggled under the burden of a large debt. This debt has been paid, but physicians can do a vast service for those girls by giving this home

our financial support when occasion arises, and our moral support at all times. From now on, gentlemen, the nursing profession will walk hand in hand with that of medicine. The nurse who engages in social service work, visiting the poor, aiding the afflicted, comforting the sorrowing, cheering the saddened, will be a counterpart for Dr. Wm. McClure. I urge that some means be inaugurated by which our organization can be more closely in touch with the organization of the nurses.

Rural Sanitation:—In this progressive age, many matters and many opportunities for service press themselves upon us. It seems that each is more essential than its predecessor.

There is none of more consequence than rural sanitation. When you remember that North Carolina is 80 per cent rural; that we are most largely an agricultural people and live in the great outdoors; that our rural sanitary conditions are very bad and rural mortality very high, I am sure you will agree with me that we are giving, even in this important age when many vital matters are pressing us for attention, too little consideration to rural sanitation.

The hook worm workers are doing a great deal of good in disseminating hygienic information and in this line of endeavor, along with their particular work, are rendering North Carolina a service the value of which very few of us realize. The doctors of North Carolina are giving the gentlemen in charge of this particular work their support. Aside from this, however, what are we doing to improve health conditions in the country? We have the best of soils, the finest of climates, limitless manufacturing possibilities; we have a homogeneous people, kindly and humanity loving. There is no reason why we should not have a rural health condition which closely approximates the ideal. We cannot afford longer to neglect this matter. I am convinced that our best work can be done along this line. It represents a problem of special difficulties and can only be solved by special study. My sense of appreciation impels me to pause just here "to render unto Caesar the thing that are Caesar's". In the wilderness of rural sanitation, one voice has cried out, cried long and well. This man's work along this line stands out pre-eminently for work well done, efficient service timely rendered. We delight to honor him. I refer to Dr. W. C. Stiles, and I take this opportunity to say to him that the people of North Carolina and North Carolina's medical profession appreciate his services. After giving the question of improving health conditions in the country districts unusual consideration

and very serious thought, and I am impelled by my better judgment to urge, yea even insist, that our Society appoint at this session a Committee of five whose duty it shall be to study the necessities and problems of rural sanitation, and to report their findings, together with such recommendations as they see fit to offer, to the next meeting of our Society.

Vital Statistic:—I want to call your attention to a matter of real concern, not only to the people of our state, but to the profession also. It is a matter of much more than passing moment, and I regret that I cannot dwell on it to the extent its importance demands. I refer to the Vital Statistic Law. It is almost, if not quite, a vital matter to all health work. I wish I could impress those physicians who have not already appreciated its value with the importance of this law. According to recent census, the death rate in North Carolina is 16.8, the highest of any state save New Hampshire, and is within three decimals of that. Our death rate is practically double that of Washington which has the lowest—8.5. Says the Journal of the A. M. A., "It is significant that the four states in the registration area which have a colored population of over 10 per cent, Kentucky, Maryland, North Carolina and Virginia, should average 15.0, while a group with equal population but fewer colored, Wisconsin, Washington, Vermont and Minnesota, average 11.5.

The Atlanta Journal recently has said and truthfully, "It is a significant fact that the health record of the United States has steadily improved as the registration area for vital statistics has increased. In 1880 where the registration area included only 17 per cent of the population the mortality rate was 19.8 per thousand, * * * In 1910 the mortality rate had dropped to 15 per thousand, the registration area having risen to 59.3 per cent. In 1912 Keurhaus of vital statistics had been established in a majority of the States and covered 63 per cent of the population; in the same year interestingly enough, the death rate was 13.9 per thousand up to that time the lowest record."

The Vital Statistic Law is the key to all sanitary work, and as soon as thoroughly understood and we become accustomed to it, we will recognize its worth, and its apparent burden will be lessened, if not entirely disappear. I appeal to every doctor in North Carolina to give this law his earnest and cordial support.

The Press:—President is to be respected, however ancient usages are frequently as harmful as good. I possess a natural diffidence to accepting the new and I try not

to "be the last to lay the old aside." As times change, new conditions arise and all progressive citizens will endeavor to be rid of the evil of the old and to possess the good of the new. Usage prevents the doctor from using public print, and in most instances does so aright. However, there are times and conditions under which the press can be of service to us for great good, both to us and the public. It seems to me that we need a revision of our code of ethics along the lines of relations of the doctors to the newspapers and public print. I have no special recommendation to offer along this line, but the time is coming, rapidly if not already here, when we shall have to use this splendid agency for good more liberally than at present. This suggestion will furnish food for further thought. I only mention it now that it may have your consideration to the end that it can be solved aright when the question finally arises, as arise it will "with the broadening of the sums." A closer relation with the newspapers can but be beneficial if that relation is properly safeguarded. Newspapers are our most powerful agencies for good when properly used. They can make us better understood and can help us to an immeasurable extent in our great work as sanitarians and publicists.

Sociology:—One of the chief, if not the chiefest characteristic of this age is the effort to improve the social condition of men. More forcibly perhaps than in any other period of history have sociological questions been brought to the forefront. In all work of this character, doctors, since they are good members of society, are interested, but there are some of these with which they are especially concerned. Indeed several are all but crowding themselves upon physicians, and we cannot escape them if we would. I am happy to say that we would not if we could. Of the very first importance is the one arising from so-called social vices. We all know the cause of general paresis and understand just what general paresis means. The records of the insane asylum show that over 17 per cent of the inmates are there because of this malady. It is unnecessary to call the attention of this gathering to the many other damages done by syphilis. The mere mention of the word Gonorrhea drags before the memory of the doctor the most hideous of all scenes. Its blighting effect is manifest in many sterile homes, numerous bed-ridden or nervous women attest its damaging effects. It has laid its deadly hand on many a noble boy and left him, if it left at all, to limp through life, all prospects blighted, to an early grave. You and I have seen it touch the fairest of earth's fair

flowers, and wither them in a blight, and then, cormorantlike, yet unsatisfied with stealing happiness from mothers, joy from wives, and health and life prospects from men, have we watched it stretch forth its talons and strike to its lasting ruin the babe in the cradle. Men and brethren, can we deal it too hard a blow? Let the blind and maimed answer, let its gnarled and deformed victims speak, let blighted hopes tell their mournful story.

We can't dodge the issue by saying "boys will be boys," nor can we justify indifference by crying, "Oh, he is just sowing his wild oats." The root of the evil, in my judgment, lies in that peculiar distorted public opinion which permits one standard for men and another for women. Only by precedent and custom can this double standard be justified. Let us remember that precedent and custom have ruined many a home, and consigned to the graveyard of the nations many a people. The mere statement of the fact that there are registered, 300,000 prostitutes in the United States, and two millions plying their awful trade clandestinely to the cost to society of three billion dollars a year, one billion more than our drink bill, sends an arrow of sadness to the very heart of a right thinking man, and justifies the time and careful consideration of any gathering of citizens, and more especially doctors. Folks must be educated out of the horrors produced by the arch vice of this day—the double standard of virtue so called, as though virtue could have any other than one standard. The knowledge and influence of physicians brings to them a responsibility can be met in no better way than by preaching virtue. The medical profession must drag its sixteen inch guns to the top of 203 Meters Hill and turn them on Port Arthur of social vices and drive them to surrender or smash them to smithereens.

Drug Habitués:—There is a matter to which I wish to call your attention which stands out preeminently as one, the evil of which we recognize, but scarcely realize. I refer to the drug habit. The poor victims are seldom rescued and of all earth's unfortunates, are almost, if not quite, the most pitiable. Man's safety from this danger and finally disease and ruin and death, is in prevention. More drugs are used illegitimately per capita in the United States than in any other nation. The commerce in cocaine, opium and its alkaloids approximates that of that notoriously drugged nation China. In 1906 4-1-10 per cent of the Chinese were opium smokers. At that same time, 4-4 10 per cent of the population of the United States were drug habitués. Has the time really come when

China should send its emissaries to us and teach us not to use drugs?

It is a well known fact that cocaine is more dangerous than opium, both to user and society. Authorities tell us that 92 per cent of the cocaine used is used illegitimately. The value of coca leaves imported in the United States in 1898 to 1902 was approximately \$832,000.00, from 1907 to 1907 it had doubled, reaching over \$1,600,000.00. The cocaine fiend is an unusual menace to a community and it is a matter to which the attention of our law makers has already been directed, but the execution of such laws has not been as strict as it should be, or else the law itself is grievously at fault. The federal government should supplement the state with national laws. These are badly needed. I sincerely trust that the laws relative to the use of drugs and especially cocaine, will be amended and made effective. The physician can be of much value and assistance in this matter, and I urge that it be given careful consideration.

Intoxicants:—Closely allied in many respects to drug using is that arch enemy of the human race—alcohol. It is not my purpose to discuss the harmfulness of intoxicating liquors. There is not a doctor in the world who does not know that there is more harm than good in them. Every intelligent man knows that it is ten thousand times more destructive than war, that it has no food value, that it causes more crime than all other agencies combined, that it defies nature, curses God; that it lowers vitality, invites disease, that its deadly breath blows out the mental flame of one out of every four who sits in mental darkness; that not satisfied with cursing homes, stabbing hearts, blighting hopes, damning souls, it shoots the forked lightening of its blasting cursedness beyond life as it lives, into the future and takes its awful toll of progeny even to the fourth and fifth generation. It is more to be dreaded than a mad dog. On every occasion it should be booted and the boot thrown away.

As a medicine, in the opinion of many of our greatest doctors, it has practically no value. The great weight of scientific evidence leads to the conclusion that alcohol is an unmitigated evil. It is about, if not already, to be eliminated from the pharmacopoeia. The figures gathered by the State Board of Health show that only about 3-4 of a tablespoonful per year per patient is prescribed by our best and highest class physicians. That it is not efficient as a medicine is easily shown by the fact that many of our best doctors never prescribe it at all. There are a number of cities in North Carolina in which it is not kept at

at the drug stores, and where no prescriptions have been written for it since statewide prohibition went into effect. When the Legislature permitted doctors to prescribe intoxicants for bona fide patients, it gave them unusual power and confided in them a fiduciary trust. This confidence must be kept inviolate. As long as this trust is reposed in us, we must not prove recreant to it. He who breaks it is worse than an Achan.

In view of our present knowledge, why should intoxicants be sold even as a drug. In all reason, I can see none. Its last refuge in this good time is behind the cloak of the doctor. Knowing the high regard in which our profession is held in this hour of its extremity, it cries "Intoxicants are good medicines and the doctors prescribe it." It is not a good medicine, and I for one want to see its mask stripped off. Let it stand forth in its true form, ugly and hideous, without a single vestige of virtue. The hour has arrived for us to put our stamp of disapproval upon liquor, and thus drive it from its last lines of defense. I earnestly urge that this Society go on record as opposing the sale of liquor even on prescription. We as a profession are encamped in Gilgal, and it is not enough that we disown any Achan which may be in our midst—we must go further and render such an one impossible, if we hope to capture Ai. If we are to have prohibition, then in the name of truth and man, let it prohibit.

Board of Health:—Perhaps the most efficient and the most serviceable work being done today in North Carolina is that of the Board of Health. Secretary Rankin and his officers are unusually capable (no state has a better health man than Dr. Rankin), and their work speaks for itself and speaks more impressively than can I. During this session full reports will be given by this Board, and I will not detain you by urging the necessity for improved health conditions in the state, or by reciting that which has been or is being done. I content myself by urging the doctors individually and collectively to give hearty and cordial support to our health officers.

I further urge that those interested (and all should be) so far as possible to attend the annual meeting of the State Society of Public Health Officers. This organization is doing a valuable service and with proper co-operation on the part of the doctors, is capable of being of very great assistance in distributing sanitary propaganda.

I am thoroughly convinced that the practical solution of all our health problems is the full time County Officers. I feel sure that this subject has not received the support from the profession which its impor-

tance demands. There is not a county in North Carolina which either by itself, or in conjunction with another, cannot have a full time health officer. The official endorsement and recognition of the whole time health officer idea by this Society would very materially aid the State Board of Health and its officers in molding public sentiment favorable to this idea. I hope this Society as an organization will take some decided and advanced step in this matter.

Duty to the Profession:—The second great duty of the doctor is to his profession. Doctors are frequently expected to be more than human, but really they are not. An incentive is essential to our best work. I am too conscious of my own weakness to criticise my colleagues, and I love my co-workers too well to scold them. I mean to do neither when I say that many, very many, doctors do not take their profession seriously. It is too often the case that we discontinue studying to a large extent after we receive our license. If each of us know that every two or three years we would have to face an examination on the results of which our continuance in the practice depended, we would study harder and give more attention to our work, all of which would redound greatly to our good and the good of the people. I unhesitatingly advocate the re-examination of physicians at least every five years. This may be a step too advanced for our day. I think not. I am of the opinion that if the Board of Examiners were to offer to re-examine physicians and if the second and successive license be made a badge of special honor, that sooner or later public opinion would compel most physicians to take these examinations even without the enactment of legal requirements. I am sure that the idea is feasible, and that a plan can be developed which would be practical and beneficial.

In this connection, I will say that for reasons too numerous to mention now, I also favor special examination, in addition to the general examination now required, for those who engage in special work. Not every man who claims to be a gynecologist is one, not every man who claims to be a specialist in any other line of medicine is really capable of doing special work. Special license would not only protect the general practitioner, but, and vastly more so, the public as well. To simply say it can't or should not be done because other states have not done so does not appeal to me in the least. It is no idle boast to say that North Carolina's history, medical and otherwise, bears out the statement that we

do not have to follow. We can teach and lead.

I am sure that practical plans can be worked out by this Society and put in effective operation without special legislation for the examination of those who desire to practice a specialty which examination should be an additional examination required of them after they have been granted a license to practice medicine, as now given. I am convinced of the practicability, as well as the desirability, of re-examination of doctors and a special additional examination of specialists. I advise the appointment of a committee to study these two suggestions and report at our next annual session.

Relation to Medical Organization:—In no way can the individual physician do more to maintain the honor and dignity of the profession, advance its interest and in so doing better serve humanity while, at the same time and what is of prime importance, make himself a better doctor than by actively identifying himself with the County District and State Societies.

"For this is the law of the jungle,
As old and true as the sky,
And the wolfe that shall keep it must prosper,
And the wolfe that shall break it must die.

As the creeper that girdles the tree trunk,
The law runeth forward and back,
For the strength of the pack is the wolfe,
and the strength of the wolfe is the pack."

Simply joining is not sufficient. One should go further than this. One should attend the sessions and take an active part in the meetings.

In the medical society, and there alone can the doctor keek step with modern progress and, at the same time, maintain his distinctive character. In this way and in this way only can we in this age of corporative ideas uphold our individuality. The larger rivers are impressive, but the smaller ones are lost in the large stream. To me the stars are more majestic and more to be admired for while the heavens are aglow, each star stands out clearly to itself and is not lost in the whole. In a well conducted medical society we all shine and while the whole is blest, each retains his personality. I have often noticed with only a few exceptions that the most aggressive and enthusiastic doctors are the ones who are actively identified with some reputable medical society, A society with only a

name is far better than no society all. Such a one has at least a chance to become a live organization. Best of all is one in which the members are active.

Sometime since, in a world famous cemetery, I stood by a lovely sepulcher. It was elegantly planned. Its whitened walls were beautifully carved. Its interior only contained dried bones. Near by was a factory. Its interior was athrong with workers and humming machinery, turning out products of benefit to mankind. Which is the most serviceable—the lovely tomb filled with the —, or the ugly factory and its machinery? The answer is obvious. If we advance professionally, we must have organization of which we can feel proud, not so much for the external appearance as for the members and character of workers within, and the thoroughness of their work. Catch the lesson, gentlemen.

Let us not become impatient if a county society becomes inanated or perchance is from its birth but a weakling. We cannot in reason except every county organization to be an ideal one, neither can we in reason hope for the state society to be ideal and all satisfiyngs We can and should, each of us, do all we can to perfect our organization. Until we have done our best to aid our societies, we should not "knock" them. Any body can tear down; any body can criticise. It takes a contractor to build. If our organizations are not active, or are not just what we would have them be, the sensible thing to do is to become actively interested in them and make them better. We cannot advance by destroying them. To tour them down is of that species of radicalism which would burn the house to be rid of a spoonful of dust under the sofa. To let them alone and not try to improve them if they are not servicable is of the Vautor Van Twiller conservative deliberateness which cogitates until the disputants are dead and then decides with much ado that since the books containing the accounts are alike and weight the same that therefore the accounts are balanced. In a word, we must catch the spirit of the hour so happily expressed in the phrase, "Federate and fight." Gentlemen, I appeal to you, stand by your organization as the patriot his flag, or the martyr the cross.

Duty to Confreres:—The third great duty of a doctor is the obligation which he owes his fellow practitioner. More frequently then may be thought, the manner in which a physician meets his responsibilities to his fellow practitioner, is an index to his professional ability and character. As we become more efficient,—more learned—we have grown broader. This is an omen of better things yet to be. We have learned

that to be intolerant is tyrannical; to be considerate is democratic-Godlike. I congratulate the profession of North Carolina because of the catholic spirit which pervades it. I am persuaded that the average doctor desires to be amicable. The problem with many of us is "How." We are salving it in a way most satisfactory. We are so busy with our work and so wrapped up in our profession that we have'n't the chance or desire to quarrel. The doctor with a large patronage who is earnestly striving every hour of the day to become more and more efficient has but little time to engage in personalities, or to become active in fraternal strife. There is no truer saying than "The idle hand is the Devil's workshop;" it is equally true that an idle brain is also. This is an era of good feeling in our profession. I am more delighted at the fraternal spirit which is manifest in our fraternity than I am in its increased efficiency, as pleasing as is that.

The time has passed for medical controversy. Believe me, please, the world is not interested in what you think of your fellow practitioner, or of what he thinks of you.

In the common parlance of the hour, the twentieth century question is "Can you deliver the goods." The public now asks "Have you ability and character. Can you do the work and do it now?" On an occasion two ministers became engaged in a heated argument on respective church doctrines, and finally agrees that they would submit their arguments to a certain farmer for his decision. After hearing them, he said "Gentlemen, my brother and I have taken corn to the old mill over yonder for 40 years. Sometimes we go by the road which leads through the valley; sometimes we journey by way of the hills. During all this time, the miller has never asked us "Which route did you take?" He has always said "Is your corn sound?" Believe me, please, your clientele will scarcely ask you what of the ability of your competitor, nor will he inquire what your competitor thinks of you. The sole question with him is can you restore me to health and do it now. In his mind he queries, "Is your corn sound?"

Of all things most strange, one of the strangest to me is that doctors should become estranged, members as they are of such an intellectual profession, with such high ideals and aspirations. When tempted to strike a colleague, Stop, Look, Listen! Think! What gains you if you destroy his professional character. It does not enrich you and leaves him poor indeed. In one of his poetic stories, Byron tells of one who would destroy his neighbor. He dug a ditch, filled it with spikes and bluded it—

a veritable death trap. Journeying that way a time after, he missed his path and fell into the trap which he had set for another. Hungry, athirsty, dying, he cried.

"The thorns which I have reaped are of the tree,

I planted—they have torn me—and I bleed."

Gentlemen, catch the lesson, please. Jealousy, fraternal strife, dispossess reason and destroy judgment. It is sure and certain cause of ultimate destruction. A time ago I looked upon one of the world's master paintings. It was the picture of the Partition of Poland. In the center lay the fallen patriot, with death stamped on his face. Bending over him with broken sword and a look bespeaking agony was the Goddess of Liberty. Near by lay the burning firebrands, there the broken walls. In the background could be seen the smoke of a conflagration. Ranging around with talons ready to strike were three vultures, representing Russia, Austria, and Prussia. The picture impressed me because I have noted the fall of a colleague and seen about him vultures, harpies, and cormorants, representing envy, hatred and greed. They overthrew him. Take care, gentlemen, be not a man-vulture who, Mephistopheles-like, drags his victim to the infernal regions, but rather be an Michael and unfold before your colleagues, and especially so if he is about to fall, the panorama of professional success, showing in the rift of the clouds the sweet face of his professional redeemer. Grecian mythology tells us that the early Greeks purchased their goods not from Neptune who offered wealth and power for sale, but from Athene who proffered culture and virtue. I am happy in the thought that as a profession, our forefathers chose to buy of Athene. They gave us culture and virtue. Let us transmit them unsullied to our successors. Remember that only by character and efficiency can we succeed.

The doctors of North Carolina by a great and glorious history are irrevocably committed to an enlarged professional vision. We must march on, or we lose our crown and kingdom. The Jews are a great people because they looked forward with unfaltering trust to the coming golden age. Face forward, please, and grow greater as have grown your forefathers before you! Our heroic past challenges us to battle. The present, glowing with opportunity and filled with deeds to be accomplished, beckons us on.

The story of North Carolina's development reads like an Arabian romance. We can scarcely realize what is being done within our state. Within ten years we

have seen the products of our farms doubled. In a few years, our manufacturing products increased in value nearly 100 per cent, our national banks were doubled in the recent ten years, and their resources trebled. Our public school funds in the last decade have increased from \$950,000.00 to \$2,750,000.00. I am happy, most happy, when reviewing professional conditions in our state, that I can say in all truthfulness that the medical profession has kept abreast with any other profession or vocation. A distinguished citizen recently said to me "As great as have been the developments along other lines, the greatest of all has been that of North Carolina doctors." All over the state there are specialists and general practitioners who are the equal of those in the distant cities. I am persuaded that there is not a body of medical men anywhere the superior of North Carolina's profession. We have 'nt, it is true, a metric Mayo in our midst; on the other hand, we are not chagrined by one who inquires for "the cow that gives the butter milk."

I congratulate the people of North Carolina on their doctors, and I point with pride to the glorious achievements of our medical men. Long after our marble erected to heroes of war has crumbled into dust, long after the voice of our orators has been stilled in death, will the beneficent influence of our medical men be felt for good. We have no excuse to offer, or apologies to make for our surgeons, internists, or specialists. They need no encomium. Their work bespeaks the highest type of character and efficiency, and points the way to better things yet to come. This is a good hour with North Carolina's doctors. We stand with faces to the morning sun, aglow with anticipations of the day, with hearts athrob at the prospects of the early realization of highborn purposes. In truth can we sing the old song of triumph,

"O Daughter of Zion awake from thy sadness,
Awake for thy foes shall oppress thee no more,
Bright are the hills, dawns the day star of gladness,
Awake and arise for the night of thy sorrow is o'er."

Tuberculosis: The Cost of a "Cure".*

By Thompson Frazer, M.D., Asheville, N. C.

"What will it cost me?" is the tenor of so many letters that the physician living in

a resort-town receives from prospective health-seekers, that I have thought it worth while briefly to consider this most practical aspect of the tuberculosis situation, viz., the actual financial burden which the seeker after climatic advantages will be called upon to shoulder.

For so many invalids arrive at the health-resort with such vague notions of the expense that will have to be incurred, and with such mistaken ideas as to the wonders which climate can perform and the length of time necessary for the performance of these wonders, that they soon find their resources totally inadequate to meet ordinary demands, and are unable to supply themselves with the necessities and comforts which they enjoyed at home. Before the tuberculosis patient takes the contemplated trip, therefore, he should be advised as to the price to be paid, for if proper care and comforts are not forthcoming, the advantages of climate *per se* are overshadowed.

It is unfortunate but true that the chances of recovery depend to a great extent on the fatness of one's purse, and whoever said that money could not bring about the blessing of health, had evidently overlooked tuberculosis. For while it may not be accurate to speak of a "cure" in connection with this disease we all know what can be accomplished in the earlier stages by means of proper treatment which includes fresh air, rest, suitable food and the like, all of which spell money; while in the later stages life is prolonged and made tolerable only through measures which necessitate the expenditure of considerable money.

The relationship between tuberculosis and income is, indeed, a close one both as to the incidence of the disease and the recovery therefrom. It may be said as a general rule that the prevalence of the disease varies inversely and the chance of recovery directly with the income. For, tuberculosis is a disease of the masses, not of the few. While its heaviest tribute is exacted from the lower classes, the social precipitate, it is not these who seek climatic advantages but rather those who constitute the great middle class, so-called. The business and the professional man must alike pay toll, but it is the clerk and skilled laborer whose scant living wage permits only a narrow threshold of hygienic safety, from whom such a large number of health-seekers are recruited.

It is almost unnecessary to add that tuberculosis is a disease which strikes one in the prime of life, before there has been an opportunity for the most provident to set

*Read before recent meeting of North Carolina Medical Society.

aside the rain-day portion; it is the young man on a salary who bears the brunt of the attack. And, although engaged in gainful occupations the man in the thirties, and more especially he in the twenties, is seldom in a position to cope with a long-drawn out disease such as tuberculosis which not only keeps the wage-earner from his work but necessitates considerable outlay as well. For rest, climate, food and physicians are expensive and time is money itself. The relationship between income and recovery is therefore a close one, and as the patient practically always come on borrowed money, the question "what will it cost me" is the first situation to be met and dealt with.

While one can seldom give an absolutely definite reply to this question as recovery and improvement depend on so many factors, it may be said that little can be accomplished, in the very lightest case, in less than six months, while one year would be a safer minimum to allow for the greater number of early cases that we see. Improvement is slow, and unless the patient's financial condition is such as to enable him to provide himself, at the resort, with proper care for a sufficiently long period, he might much better have stayed home where he would have good meals and good quarters at less money.

The cost of a room and board varies greatly in the resort. This most important item in the treatment of tuberculosis is too often relegated to second place, and it should be definitely stated that good food and comfortable quarters are essentials in the management of this disease and that economy here is misdirected. Board of fair quality may be had at prices varying from ten to twelve dollars a week, depending on location, room, and other features. Occasionally it may be had for eight dollars, only exceptionally is it to be had for less. If we rather arbitrarily take ten months or 43 weeks as the length of time necessary to effect a decided improvement, we have at \$8, \$10, and \$12 a week for room and board, a total of \$344,430, and \$516 dollars respectively for this period. Incidentals would amount to \$2 dollars a week at least, or about \$100 for 43 weeks; and allowing an average of \$20 dollars a month for physician's services we would have a grand total of \$644,730 and \$816 for the entire period. The first estimate is perhaps too low and it would be safer to allow \$700 (exclusive of car-fare) as the minimum amount compatible with the needs of the patient for a period of ten months.

Now what has been said applies to the earlier cases only. If the disease is further advanced the duration of treatment and the

cost of extras will be correspondingly increased. The physician not familiar with the actual conditions has no conception of the number of tuberculosis individuals who, insufficiently provided with this world's goods, come to the health-resort hoping in a few weeks' time to recover health which is perhaps beyond recovery even under the most favorable circumstances. Every physician in a climatic resort has such patients whom he treats gratuitously, and gladly. Sooner or later, however, these cases become a charge on the town and must either be supported or sent home. Not being able to command the proper facilities and returning home much worse than when they arrived, they have taken the trip and spent their money literally for nothing. Not realizing the need of rest, proper food and accommodations they have staked all on "climate" and have lost. It can, therefore, not be too strongly emphasized that the best climate in the world is useless in this disease unless supported by the essentials above noted. Should the money not be forthcoming to provide these essentials it behooves the patient to remain at home and avail himself of the fresh air, and food which can be had for much less, and to put himself under a competent physician's care, instead of attempting to pursue the cure at a climatic resort under adverse conditions. Before taking a trip he should be made to count the cost and if his resources do not permit a rather protracted stay at the resort, including the proper facilities for taking the cure, he should be made to understand that without these, he will be unable to reap the benefits of "climate."

It is hoped that this brief paper may throw a little light on the actual conditions which prevail and that by discouraging the tuberculous from seeking climatic advantages unless prepared to meet the increased financial responsibilities, it may prevent much unnecessary hardship and suffering.

Recent Conclusions Regarding Paresis*.

By Isaac M. Taylor, M.D., Broadoaks Sanatorium, Morganton, N. C.

Paresis under its many synonyms, has long had a place in medical literature, Haslam describes it and Esquirol, in his treatise on Mental Diseases, gives an account of a typical case under the head of Monomania.

In the nineteenth century, with the general advance in civilization and the great increase in urban population there was a notable increase in the prevalence of the

*Read before recent meeting of North Carolina Medical Society,

disease and now in the twentieth, its importance should make it of interest to every clinician.

With the advanced development of critical medical study and the more general understanding of post mortem findings, many cases formerly accepted under other classifications were found to be paresis, and its age range has been extended from the period of maturity to childhood on the one hand and advanced age on the other, each decade showing a proportion of cases, these clinical conclusions have been confirmed at autopsy.

Twenty-five years ago paresis was the one mental disease recognized as having a definite clinical course and a typical cerebral pathology.

Very early in the literature on the subject we find that syphilis was either considered as a factor in the production of or was present in many cases as an incident in the lives of those who as a result a predisposition, fast living, sexual excesses and business stresses had become victims of the disease.

In 1857 Esmarch and Jessen attributed to syphilis as the cause three cases of paresis, and from that time it had been a subject of controversy to reach a practical settlement in the past few years through laboratory study and the general acceptance of the Wassermann reaction.

This conclusion has had further confirmation in the finding by Noguchi and others, of the spirocheta pallidum in the spinal fluid and the brain substance itself.

We may say that the dictum "no syphilis no paresis" is universally accepted by students of the subject.

The discovery of the living organism in the brain substance has again brought into prominence the discussion as to where paresis belongs in the syphilitic process, whether it is a late sequel or another evidence of the activity of the causative spirocheta.

The more generally accepted theory is that it is evidence of an active process and that in syphilitics furnishing the proper conditions for development, paresis may make its appearance at any period in the disease.

No considerable advance has been made in the study of the symptoms of developed case as seen by asylum physicians, the earlier descriptions were accurate in every particular, but through the laboratory we are enabled to reach more correct conclusions regarding the border line cases, those seen very early in their development and those simulating other forms of mental trouble, here the Wassermann reaction with the blood and spinal fluid have been

of untold advantage to the investigators.

We can no longer be content with a review of the morbid psychological conditions present with our patient, the evidence of impaired nerve function and of destruction of the higher nerve centers, but we must through laboratory investigation know the reaction of the blood and spinal fluid to the Wassermann test, know the reaction for globulin in the spinal fluid and the cell content of the spinal fluid.

A further step in the study of the spinal fluid is the application of the colloidal gold test, promising in its present development to be a great aid in differentiating the several forms of cerebral syphilis. Introduced by Lange it is under critical study in the laboratories of this country and now widely accepted as a test for syphilis of the central nervous system.

With a positive Wassermann with the blood serum or spinal fluid an increase in the cell count of the spinal fluid in addition to some of the classic symptoms of paresis we may be safe in a diagnosis of paresis even in the recent cases.

The positive diagnosis of paresis and its differentiation from other forms of syphilis of the central nervous system rests on a correct interpretation of the laboratory findings it is rarely that a paretic is found who does not give a positive Wassermann with the blood.

"Nonne's findings are in Paresis.

"Wassermann reaction with the blood positive (100 per cent).

"Phase I Globulin reaction positive (95 to 100 per cent).

"Lymphocytosis (95 per cent).

"Wassermann in spinal fluid.

"Positive in 85 to 90 per cent with original method and 0.2 cc. fluid.

"Positive in 100 per cent with larger quantities of the fluid."

However satisfactory to the investigator a definite diagnosis may be, the individual patient gains little unless this leads to some remedy for prevailing conditions that promises to bring a permanent cure, a stay in the progress of the disease or an amelioration of his symptoms.

The brilliant results which followed the use of salvarsan in other chronic syphilitic troubles, led to the hope that a remedy had been found which would control paresis.

The first cases were in every way discouraging, the subjects in advanced stages of paresis were not improved in many cases the opposite was the result with some fatalities, later with a further improvement of the methods of administration, the injection of salvarsan and neo salvarsan into the spinal canal and still later the use of

salvarsanized serum for the injections better results were had and now further progress is being made by a more general use of the laboratory findings as an index of the results following administration of the doses, the selection of the more recent cases recently has materially affected the results obtained.

In some cases a stay in the progress of the disease in some actual remissions have been reported and even in some advanced cases there has been a decided amelioration of symptoms.

In reviving the results it must be still kept in mind that there must still remain a doubt whether we are dealing with a paresis or some other form of central syphilis, the differentiation is not yet exact, and we must still not forget that under all methods of treatment frequent remissions are not uncommon.

Not yet can we say that there have been any cures, until a very long time passes without symptoms we cannot count on a cure and all the experimentation has been of too recent a date for conclusions.

The treatment of paresis at the present time demands the persistent use of salvarsan, neo salvarsan or salvarsanized serum intra-venously and in the spinal canal it has not been proved that salvarsan does not reach the brain and membranes by the ordinary channels of nutrition and on the other hand the more direct approach through spinal injections may be blocked by organized inflammatory products.

The use of mercury in connection with the arsenic treatment is called for in some cases and the general hygienic measures must not be neglected.

In conclusion the diagnosis of paresis is not complete until there has been a thorough laboratory review of the blood and spinal fluid.

The treatment has not been sufficiently tried until there is a return to nearly normal of the cell content of the spinal fluid or a marked exacerbation of the symptoms we are seeking to relieve.

Goiter.*

By J. D. Willis, M.D., Physician to Lewis-Gale Hospital, Roanoke, Va.

The thyroid body, with our present understanding of the effects of its secretion, gives us much concern, and affords us much food for further study. This "wonder gland" is situated at the front and sides of the neck opposite the lower part of the

larynx. It consists of two lateral lobes and an isthmus. The lateral lobes are about two inches in length, an inch and a quarter wide, and three-quarters of an inch thick. The junction of the middle and lower lobes are joined by the isthmus which stretches across the trachea at about the third tracheal ring, and is about half an inch wide and deep.

In the embryo the thyroid develops at the dorsum of the tongue and during the development period of the child in utero it descends to its final resting place astride of the lower part of the larynx. In the early development of the thyroid there is an open duct from the gland to the trachea, opening at the dorsum of the tongue. This is formed by the descent of the gland with a pulling of the mucous membrane of the trachea after it. At birth this duct is closed, and obliterated except for a fibrous band which passes from the thyroid to the foramen caecum at the dorsum of the tongue. This thyroglossal duct sometimes remains open but is closed at its upper end, when so we have the thyroglossal cyst.

The thyroid is a very vascular body, weighing from one to one and a half ounces, and contains proportionately 35 times as much blood as the brain. It is probable that the normal gland furnishes six times as much internal secretion as is necessary for the body economy. It was formerly believed that each of the ductless glands had a special function. It is now known that in perfect health all the ductless glands are in harmony, one depending upon the other for the regulation of its activity.

The thyroid gland is invested in a fibrous capsule, and is made up of acini lined with a single layer of cuboidal cells and filled with a yellowish colloid material, together with a small amount of fibrous interstitial tissue, bloodvessels, nerves, and lymphatics.

Any enlargement of the gland is termed a goiter. The cause of goiter is unknown. The most popular theory is that it may be due to an irritant in drinking water peculiar to a locality. The report of the Mayo clinic is to the effect that they can see nothing to suggest such a cause. Simple goiter is most often cystic, due to rupture of the walls of acini and running together of the colloid material. There may be a large development of fibrous tissue in simple goiter, and there may even be a deposit of calcium salts. The goiter of adolescence is due to edema of the gland with water colloid. Fortunately malignant disease of the thyroid is rare, sarcoma, carcinoma and mesothelioma are the forms met with.

Adenoma of the thyroid is where the acini become distorted and distended. The true

*Read before Roanoke Academy of Medicine, April 6, 1914.

exophthalmic goiter shows an increased parenchyma or an increase in certain parts of the parenchyma. The toxemia from degeneration of simple goiter or adenoma will produce symptoms similar to true hyperthyroidism, with the exception that the protrusion of the eyes is not so great.

Exophthalmic goiter is a chronic disease with acute exacerbations. Plummer speaks of a period of ascent during an acute exacerbation which represents the period before the advent of beginning dilatation of the heart. This period is for three to six months from the onset usually. The symptoms of acute hyperthyroidism are, enlargement of thyroid, protrusion of eyeballs with widening of the palpebral fissure, tachycardia, tremor, loss in weight, ravenous appetite, diarrhoea, nervousness, insomnia, headache, sometimes shortness of breath due to pressure of the goiter, brassy cough, and sometimes paralysis of the vocal cords due to pressure on the recurrent laryngeal nerve.

An essential in the treatment of hyperthyroidism is rest. Solis Cohen believes that extract of thymus gland in conjunction with rest may be helpful. When a stage of lessened activity of the gland has been obtained, the most successful treatment is ligation of bloodvessels, nerves, and lymphatics at the superior pole, or what may be as beneficial, the injection of boiling water into the lateral lobes of the thyroid.

Mayo claims that the average gain in weight in their cases where ligation had been done, for the first three months was 22 pounds. At the end of this period they have the patient to return and have the lateral lobes removed. In removing the lateral lobes it is highly important to leave the posterior portion of the fibrous capsule in order to protect the recurrent laryngeal nerve.

Certainly all goiters should not be removed. However when toxic or pressure symptoms are sufficiently severe, to delay operation is dangerous. It is true, however, that fully 50 per cent of the cases of hyperthyroidism recover without the influence of treatment, and 30 per cent more will recover under rest. This leaves 20 per cent of the cases of hyperthyroidism for probable surgical intervention.

It is my belief with McGuire that eventually hyperthyroidism will be treated successfully in all of its phases by medicinal measures.

Cholecystitis as a Sequel to Typhoid Fever.*

By J. F. Highsmith, M.D., Fayetteville, N. C.

Inflammation of the gall bladder like many other inflammatory infections varies so much in grade that certain forms do not cause appreciable symptoms while on the other hand it may be fulminating in character. The causes at large of cholecystitis are those usually of inflammation, most frequently some pathogenic organism favored by local irritation of a mechanical kind. But perhaps the most common cause of this disease is the typhoid bacillus which creeps up the common duct from the bowel. The favoring conditions helping to cause trouble when the typhoid bacillus once enters a gall bladder, is the presence of gall stones, which seem at once to become offended and in due time we have the patient seized with a chill and fever, followed by pain and tenderness in the region of the gall bladder. In some cases extreme nausea, highly colored and scanty urine, heavily coated tongue, dry skin and torpid bowels, temperature varying from 100 to 105, presenting a typical picture of a septic condition. This condition in olden times was often mistaken for malaria but thanks to the laboratory and microscope this is no longer true. Successive attacks may occur each one milder than the preceding one, gradually terminating in resolution or a partial resolution, most likely the latter. The acute process often seems to become extinct and suppurative or non suppurative cholecystitis only appears several months after typhoid fever.

Gregg claims that typhoid bacilli have been found in the gall bladder as long as fifty-two years following typhoid fever. The severest or fulminating form often terminates in an abscess which if unrecognized may rupture into the peritoneal cavity producing shock and death. But the tendency of cholecystitis secondary to typhoid fever is not to rupture of the gall bladder for the gall bladder has a wonderful capacity to carry its burden from time to time and through a process of compensation the patient lingers on and on suffering from time to time from this infection which is not at all plain. Cases of typhoid fever which run the usual course and the convalescence is delayed, the patients not regaining their formal digestive powers, are undoubtedly in my mind often due to typhoid bacilli present in the gall bladder and cholecystitis of a mild form resulting in

*Read before recent meeting of North Carolina Medical Society.

some way, offering constant irritation to the portal circulation. We know it to be true that in taking the history for gall stones that it is quite frequent that we have the history of antecedent typhoid fever.

A. D., age 40. Male. Came under my care September the 6th, 1906. Giving a history of typhoid fever one year previous, was well until this attack of fever. Since that time he has suffered more or less all the time from what he described as indigestion, constipation, tendency to become nauseated and now and then would vomit. With his worse attack tenderness was most marked over the gall bladder. Slight jaundice at times, skin of a muddy hue, was thirty pounds under his usual weight at that time. A diagnosis of gall stones or cholecystitis with possibly catarrhal appendicitis was made. Operation was decided upon and performed on September the 20th. The appendix was negative. The gall bladder was found to be pale, much thickened and did not empty with ease on pressure. No gall stones present. Opened and drained a thick tar-bile. Patient made an uninterrupted recovery and left the hospital within four weeks time. Since then states that he has been perfectly well.

Mrs. T., age 50. Mother of six children. Had enjoyed good health until July 1906 when she entered the hospital for treatment. Her case was diagnosed as fever giving a positive Widal reaction. She had an average case of fever of about four week's duration. At the expiration of which time her fever was normal and to all appearances she was on the road to recovery without complications. But within about three weeks time the patient developed fever of an intermittent type, preceded with chilly sensations and followed by sweats. It was with great difficulty that she could take nourishment and retain it. Much tenderness developed over the gall bladder. No colic but aching pains extending under the right shoulder, plus jaundice gradually becoming pronounced and her condition very alarming. Was operated upon September the 1st, the gall bladder found to be contracted and full of gall stones, the stones were removed and the gall bladder drained. No bile discharged for a week or ten days and the patient was extremely ill but gradually after a time began to throw off healthy bile and made a satisfactory recovery. Now enjoys the best of health.

Mrs. M., age 40. No children. Contracted typhoid fever of the most fulminating type June 1913. Condition alarming, for weeks after battling with fever and hemorrhages gradually convalesced to that

extent that she could be up and about her room but from time to time extremely nauseated and it was with great difficulty that she could take nourishment, consequently gained strength very slowly. This condition of her digestion gradually became plain as soreness and tenderness became localized over the region of the gall bladder. Then a diagnosis of cholecystitis as a sequel to typhoid fever was established. She was extremely ill and her case at times seemed advisable for operation but she preferred to be given a chance to use medical treatment. This was done by assisting elimination all possible. Carlsbad water was given freely, repeated doses of calomel now and then, stomach lavage, urotropin and digestive tonics. Patient improved very slowly. At the present time she enjoys reasonably good health but I predict that sooner or later she will have to come to operation and I believe the sooner the better.

Undoubtedly, most of you have had in your respective work many, many instances similar to these which I have roughly mentioned. I could report many more but these will suffice I trust to draw renewed attention to the fact that the gall bladder in typhoid fever is often found to be the habitat of the typhoid bacilli and that the typhoid bacilli may remain in the gall bladder for years after a patient has had typhoid fever with perceptible danger. I believe all things being equal it is good surgery to drain the gall bladder in all cases of marked cholecystitis.

The X-ray Prognosis of Fractures.

By W. S. Lawrence, B. Sc., M.D., Memphis, Tenn., Roentgenologist Baptist Memorial Hospital, and St. Joseph's Hospital.

The X-ray picture reveals to us far more about most fractures than we can learn in any other way. It shows us, when carefully and rightly interpreted, the number of fragments, the direction of the lines and planes of fracture, the amount and direction of displacement, and the relation of the fragments to known points of muscular attachment. This being the case, the prognosis based upon the findings of the X-ray picture becomes a matter of the greatest importance and of very considerable definiteness and accuracy. But it must have for its foundation the whole fabric of one's X-ray experience—experience gained from a number of cases watched throughout their whole course and whose end results are known. This prognosis must also take into consideration the factor of a right and reasonable line of treatment. What this treatment should be is usually clearly indi-

cated by the X-ray examination.

The examination of a number of cases of old fractures with unsatisfactory results, establishes the fact that these results are brought about chiefly by three causes: first, by angular displacement; second, joint implication; third, the presence of what may be termed *trophic rarefying osteitis*. Overlapping or transverse displacement while undesirable, the sole cause of shortening and of the palpable lump usually called callos, is not of itself a cause of disability or non-union. As long as any part of the fractured surfaces are in actual contact, union will in all probability take place, and if the alignment of the fragments is such as to preserve the genial direction of the bone, functional results will be good, despite the shortening caused by overlapping. If, then, we find that upon repeated attempts it is impossible to bring the fragment into correct position, or on account of the obliquity of the line of fracture it is impossible to keep them there, our prognosis still is that the result will be good, provided there is little angular displacement. But angular displacement to an uncompensatory extent is fatal to a good functional result. If the fracture is above or below a hinge joint, particularly those of the leg, and the displacement is in the antero-posterior direction, the result of union in this position would be to simply open or close the hinge to a greater or less extent, which would not at all interfere with the working of the joint. Angular displacement then in this direction is not necessarily serious. But if the overlapping and angular displacement is lateral instead of antero-posterior, it is quite different. In this case the wear is thrown on the corners of the hinge, and the results are disastrous. The joint is thrown out of gear, as it were, and an arthritis results, which is usually ascribed to rheumatism.

Pardon me here a slight digression. I believe the underlying cause of many bad results in fractures to be this. We treat the case with an eye single to the bony injury. We are mindful only of getting strong union of the broken bone. If the joint above or below gives trouble some months later it is unfortunate, but we are in no way to blame. Thinking of the bone, we forget that there are muscles that will atrophy from too long disuse, or become incapable of contraction from inflammatory reaction and pressure. We forget that there are nerves to cause exquisite pain when too closely pressed by pads or splints. We forget that there are tendons which may become matted together and adherent never to move again—not as an inevitable

result of the injury, but a result of faulty treatment by means of pressure pads. What worse, and yet what *more common* practice can you think of than this? A Colles in which there is a bony projection on the back of the radius which cannot be entirely reduced, even under an anesthetic with careful manipulation and sufficient pressure. This projection of course raises the tendons on the back of the wrist. Left alone they would be comparatively free to move over it, but we do not leave it alone. In the vain hope of forcing the bony projection down, we place over it a pressure pad, and over that a hard splint. It cannot be forced down in this way. Repeated X-ray examinations have shown this. What have we done? We have placed the tendons between an upper and a nether millstone. They rebel, they inflame, they nat together, a thecitis extends up the arm and down to the back of the hand. The hand is swollen and painful, and if the pressure is not relieved, and generally it is not, all hope of a supple hand is gone.

I stated above that the transverse displacement is not of itself a cause of disability, but transverse displacement always and of necessity gives some angular displacement, and upon the amount and direction of this displacement depends the prognosis. The degree of angular displacement necessarily caused by the transverse displacement varies with the location of the fracture. It will be least when the fracture is at the middle of a long bone, and approach a maximum as we approach a joint. Take for illustration the femur fractured at its middle point, displaced laterally and lapping to some extent. The upper fragment is misplaced outward, and the lower inward. If the displacement is equal in each fragment, each will be displaced about one-half inch. The fractured ends of each fragment will swing through an angle measured by an arc one-half inch in length. Since the size of an angle measured by an arc of given length depends upon the radius of the circle, it is easy to see that there where the radius is about twenty times the length of the arc, the angle is a small one. This amount of angular displacement is compensatory, and in this particular case is almost entirely made up for by the head of the femur swinging a little further outward than it did before the fracture occurred. But come down to the knee, say, within two inches and displace the upper end of the lower fragment one-half inch inward. You have caused it to swing through a certain angle. This angle is measured by the same arc, one-half inch. But the circles radius now is two inches instead of ten. The angle, then, subtended

by this arc is five times as great as in the former case. This amount of angular displacement is entirely too great, it is uncompensatory. What is the result? The knee joint is thrown out of gear. The weight of the body is thrown almost entirely on the inner condyle instead of being evenly distributed on both. The inner condyle and the inner surface of the tibia carry more than their share of the body weight. A chronic arthritis is set up as a result of angular displacement. Angular displacement to this extent must be corrected either by simpler means or by an open operation, if we hope for a useful limb.

The next most frequent cause permanent disability is joint involvement, or I might say primary involvement. Angular displacement itself produces joint involvement later on, which may be termed secondary involvement. Primary joint involvement refers to those cases in which the joint itself is injured at the time of fracture. If the joint is badly crushed and there are a number of fragments we can hardly look for a better result than a stiff joint and permanent disability. I do not think that the mere fact that there is a line of fracture or a crack in the bone extending into a joint renders the prognosis more grave to any considerable extent. These cases for the most part do excellently.

A much more serious condition, is that in which some part of the bony structure of a joint is broken, and some other parts are slightly dislocated. This dislocation is not infrequently overlooked, our attention being centered on the break. This in turn is not an uncommon cause of a joint being thrown later out of gear, or out of plumb. The most striking illustration of this is found in Pott's fracture. The trouble results not so much from the broken fibula, as from an often unreduced dislocation of the astragalus and tibia. In this injury the fibula is fractured above the ankle joint, the lower fragment or external malleolus is torn from its attachment to the tibia. This widens the joint space—the space between the external and internal malleoli and allows the astragalus to slip outward on the articular surface of the tibia. This dislocation may be only one-fourth of an inch or even less, and is not infrequently left unreduced. The foot is put up in plaster, the fibula heals promptly enough, the patient begins to walk, and then the trouble begins. The foot swells, is painful, and will not support the body weight in a firm graceful manner. What is the trouble? Normally the weight line of the body falls through the center of the tibia and the cen-

ter of the astragalus. When the astragalus is misplaced outward, the weight line no longer falls through the center, but through its inner edge. This tends to produce as arthritis from too much wear on one side of the bone, it also unduly stretches the internal ligaments of the joint, throws the sole of the foot outward and produces slough foot.

Another cause of permanent disability, or at least disability of long standing is a condition of the bone known as *trophie rarefying oestlitis*. This is an infrequent condition and is seldom suspected, but when present, is quite sufficient to cause non-union or disability of long standing even when union is apparently good. This condition can be diagnosed only by the X-ray plate. Its symptoms are only pain, swelling, and weakness, but the X-ray picture is unmistakable. The pathology is a decrease in the specific gravity of the bone, an absorption of the lime salts—a rarefying and softening of the bone. This change usually extends to all the bones of the adjacent parts. The absorption is never complete in any one place, a decided outline of the bone is always left, appearing entirely different from absorption due to necrosis. This condition may arise from an injury not sufficient to cause a fracture. I have seen it once in a badly sprained ankle where there was no fracture, and once in all of the bones of the foot when the injury, sustained from jumping from a moving vehicle, was not at the time regarded at all seriously. The cause of this rarefying osteitis is not clearly understood. The condition seems to be trophic in nature and hence its name. It hardly enters our prognosis in recent cases except to make us more guarded, knowing that in a few instances it will arise even when the injury is apparently not serious. The largest factor in the production of this condition seemed to be that of putting the bone at rest. It does not arise in every bone whose functions are suspended for a time, but in such a large percentage as to indicate that rest, or possible rest combined with restricted circulation caused by fracture dressings, is a very strong predisposing cause. It is somewhat similar to the atrophy of a muscle from disuse. This condition is present in many cases of ununited fracture, nor will the bone unite as long as it is present, no matter how firmly it is fixed, or how good the apposition. It is a positive contra-indication to surgical intervention. In these cases, all dressing should be discarded. Let the part dangle if it must. This combined with massage and passive movements for six months or more may entirely restore the bone to its

normal tone, and then we may take active steps looking toward union of the bone.

The Runabout Baby.

By W. Nicholas Lackey, M.D., City Health Officer, Gallatin, Tennessee.

The elementary knowledge contained in this paper is not intended for the Pediatrician, but for the general practitioner, and others interested in this phase of preventative medicine.

We that are in general practice are often negligent, our attention being focused on the child's first year of life fraught as it is by its many perils to the dangers and precautions that should be taken during that period of the child's life, from one to three years.

In many instances it requires nearly as great care to bring it to the school age, healthy, and normally developed as it does to make it survive the first year of life.

Chapin¹ says: "This is a time of rapid growth, with cutting of teeth, when new functions are inaugurated, which require watching. A period when occurs a transition between the breast, or bottle, and the ordinary mixed diet of childhood."

To the mother now comes the debate between social and maternal instincts. If she now resumes some of her social duties and pleasures, she is forced to leave the child with a nurse, unless she is living near relatives. The South indeed is unfortunate in the passing of the ante-bellum negro mammy, since the young negro nurse of this generation usually thinks she has earned her modest wage if she keeps the child from falling into the fire or from making a meal out of the coal scuttle. More than likely she may feed it anything that chances to be handy, whether that happens to be boiled cabbage and "pot licker" or mince pie and dill pickles. As a consequence the mother who yields too completely to social instinct inquires virtuously of her doctor why her child has such a weak stomach, intimating perhaps that some members of the father's side of the family possessed weak stomachs as well as other portions of their anatomy higher up.

The driving force of the runabout's insatiable curiosity impels it to explore its surroundings with a persistence and thoroughness that would throw a pet monkey into a fit of jealous rage. This is but a normal condition, as the desire to know and its gratification is the only way a child has to gain experience. It has to burn its fingers in order to be convinced that the stove is hot. It will never know until it gets scratched that the cat's tail was not intend-

ed by nature as a convenient handle.

As taste is one of the earliest senses to be developed in a child, it will whenever possible, place all of its newly discovered treasures in its mouth, the infant research-laboratory and court of last resort in sense perception. The runabout crawls, and slides over the floor while at play so that its hands readily become soiled, and when placed in its mouth they may carry there quite an assortment of germs, usually harmless, but at times disease producing. We now know that such diseases as tuberculosis, diphtheria, scarlet fever, measles, whooping cough, meningitis, la grippe and colds and other diseases enter the body through the mouth and nose so that dirty hands, thumb sucking, foolers or pacifiers, kissing on the mouth, handkerchiefs, etc., may open up dangerous avenues of infection.

The mother suffering with a cold or influenzae not only should avoid kissing, coughing or sneezing in the child's face, but by tying several thicknesses of gauze or cheese cloth over her mouth and nose when she attends the child, can do much to protect it from infection.

Playing on dirty floors, infected by careless spitting or by sputa tracked in by the feet from our spit bespattered sidewalks, or by the germs settling to the floor from droplets caused by persons coughing or sneezing without properly covering the mouth and nose, may account for some of the cases of consumption that occur so frequently at this age. It is now an accredited fact that the majority of children are infected with this disease from their environment.

Kerley's² exercise pen is an excellent piece of nursery furniture to keep the child from off the floor. For from the child's position there it is exposed to germs more than the adult higher up, and also to the cold air passing under the doors in our chilly Southern houses, depending, as many of them still do, on the cheerful though ineffectual grate fire. Those pens give the child safe places to play and exercise, but the objection is that some children, especially boys, have the simian instinct for climbing so highly developed that it would take a staked and rider fence with two strands of barbed wire on top to keep them in any pen or enclosure very long at a time.

In the homes of the poor if a corner of room be penned off with chairs laid on their sides, or by other suitable means and the floor covered with clean sheet upon which the child can play, it would minimize some of the dangers of floor infection.

Probably finished and waxed floors provided with a few rugs that can be taken

out of doors to be cleaned, painted walls that can be wiped down, window boards for ventilation, an exercise pen, banishing the dangerous, dust-stirring broom in favor of the vacuum cleaner, are prime factors in the improving of modern nursery hygiene.

Dirty back yards and alleys, littered with dangerous refuse of all kinds, buzzing with the disease carrying flies attracted in swarms by the uncovered garbage can, open slop bucket or by the mediæval unscreened surface closet, are places fraught with great danger to the meddlesome young child of the runabout age. For we should heed the words of Dr. Armstrong² when he says: "The fly is a much neglected factor in the etiology and transmission of summer diarrhoea. Mothers should be educated to the necessity of protecting their children from this everpresent disease carrier.

To the very common practice in some localities of lugging sleepy young children to places of amusement at night, the "movies" for instance with the consequent interrupted sleep and strain on the youthful eye, are due the causes for many nervous and fretful children. The high strung and unstable nervous system of our precocious, over-indulged runabout children in this sex-crazy, tangoing age, need plenty of health-restoring sleep, the only safe anesthetic to soothe their too active mental condition. The greatest stress on sleep is one of the first steps in the proper hygiene of the child's delicate nervous system.

We sympathize with the mother in her desire and need for recreation, but she must learn that home and bed are the proper place for the runabout child. She must look upon this fact as only one more sacrifice she should make on the sacred altar of maternity. All children of this age should be in bed by six or seven o'clock and have from twelve to fourteen hours of undisturbed sleep in a quiet well ventilated room. Up until eighteen months they should have a morning and an afternoon nap. After that age is passed one nap a day is sufficient.

Many parents and grandparents think that children were put on earth simply for their selfish amusement. By a system of mental cramming these misdirected ones prepare the child to show off before admiring friends and relatives, not realizing as Dr. Rachford³ expresses it, "That early precocity is an abnormal condition in the human infant, which if encouraged may result in mental impairment.

The nervous system of the child is unlike that of adults. It is excitable, unstable, with less inhibitory control, reflex irritations are many, nerve centers discharge their nerve forces much more readily and

more fitfully than in the adult. (Rurah)⁴—we see this often exemplified in the "only child." Its being thrown too much in company with adults causes a too rapid development of the intellect. While such a child may have knowledge of things beyond its years, it is frequently backward in questions of judgment and self-reliance. It often lacks initiative force from too constant attendance of mother or nurse.

The runabout needs the "psychic hardening" that is only obtainable from companionship with children of its own age. It should develop mentally and physically by engaging in that healthy form of bird puppy play so pleasing to children of that age when left to their own devices, and freed from the constant nagging of over zealous mothers. The too carefully guarded child who is not taught to bear the stress of life and play with other children without bawling its head off, will break when it is called upon to bear the strain and strife in this world of sorrows and disappointments. They form that class of people called the nervous unfit or the neuresthenics, which supports the sanitoriums for nervous diseases that dot our land.

The teaching of emotional control, obedience, duty and at a later age, love for work is especially needed by American children, for foreign visitors both give us the cake and pass us the tobacco bottle for having the most indulged, pertest, and worst spoiled children in the world.

The bright, high strung, emotional American child at the runabout age cannot be controlled always by reason or moral suasion, for at times the only mental impression that can be made to reach its brain is by certain painful sense impressions⁵ at one end of its vertebral column by the judicious application of the mother's slipper. Self-control cannot be taught by always making it easy for the child.

Many mothers and grandmothers will mentally or verbally recommend that you consult an alienist when you tell them that most well and normal babies have few or no symptoms when they cut their teeth, for like worms teething has been blamed with every disease to which child's tender flesh is heir.

If the child develops a violent attack of indigestion it is teething, notwithstanding the fact that you have learned by putting the family through the third degree that a dining has been made, not wisely but too well, upon ice cream, cake, candy, bananas and peanuts as desert washed down with a glass of circus lemonade.

While it is true that some children may, and do at the runabout age, become nervous and fretful, sleep poorly and have some loss

of appetite, simple stomitities, drooling, rarely vomiting or slight diarrhea, some slight rise of temperature in afternoons, yet modern doctors are slow to attribute every symptom shown during teething as necessarily due to this condition, until they have eliminated all other discoverable causes.

Delicate, poorly nourished children who have been bottle fed on condensed milk or proprietary infants' food during their first year, who are backward about cutting their teeth, who develop a high fever or other stormy symptoms, should be examined by a physician to ascertain whether or not they are suffering from rickets—a condition due to the child's diet not containing all of the elements necessary for the development and growth of its boney framework.

Kerley has seen convulsions in rachitic child. I saw during dentation a child run a temperature of 103 to 104 degrees F. for three days. Repeated examinations failed to show any other cause for the disturbance except that of the exaggerated reaction of the child to dentation. In infantile myxoedema, and syphilis, we may also see some very marked symptoms during this time.

(Zahorsky)⁶ Hutchinson's teeth, indicating syphilis, occur in the permanent and not in the milk teeth. Notched or peg-shaped deciduous teeth do not indicate syphilis.

Neumann⁷ calls attention to the circular caries and deposits at neck of milk teeth that are due to the associated disturbances of nutrition occurring with scrophulo-tuberculosis.

Children with bluish, spongy or bleeding gums, who are sore to the touch and cry whenever moved, are not suffering from rheumatism, or from what grandmother calls growing pains, but from another disease of euto cooked foods, like pasteurized sterilized or condensed milk or some of the proprietary infants food that do not require the addition of fresh milk. This disease is known as scurvey and is usually cured by change of diet and the giving of orange juice daily.

Contrary to popular impression it is the big crowned molar teeth and not the sharp pointed canine or so called stomach and eye teeth that have the most difficulty in getting through the gums. The temporary or milk teeth must not be allowed to decay, abscess, ache, and be extracted too early, thus removing the support of the jaws, retarding the proper growth of the bones, so that the permanent teeth which are directly underneath the temporary ones will be irregular and crowded for lack of space. The child needs its teeth even *more than the adult*. Their extraction should be left to the dentist and not the vagaries of a slammed door

and a piece of string.

Up until two years clean the child's teeth at night with a piece of cotton dipped in a weak solution of boric acid. After that time begin to teach the use of the tooth brush with some simple tooth powder. It will become a habit that will last through life. If your dentist understands children and does not produce pain or attempt to do too much at the first one or two sittings, it is surprising at what an early age children will permit him to treat and fill cavities in their baby teeth.

Owing to the importance placed on the subject of worms by mothers, and grandmothers, a paper of this general character would not be complete without some mention of helminthiasis in children. It is pretty well agreed now, with the exception of hook worms, that only a small percentage of cases infected with intestinal parasites display any obvious symptoms, even eosinophilia is not constant, but when present is accompanied by other clinical manifestations.

The symptoms of hook-worm infection leading to the examination of the child's stool, has surprised us by the frequency with which we find other intestinal parasites present that would not have been suspected in the absence of the examination of the stool. The symptoms that mothers attribute to worms we now know are due to other pathological conditions, but we must remember that on occasions the intestinal parasites, other than the hook-worm, may give rise to serious secondary symptoms. While this paper does not concern itself with treatment, allow me to say by way of digression, that filmarion oil, which Wood thinks is the true anthelmintic constituent of male fern, is, I think, decidedly the best remedy that I have ever used against the tape worm, as it causes none of the at times alarming by-effects of filix-mas, which may be more dangerous to a young child than the presence of the parasite.

The diseases of childhood are practically endemic. It is nearly impossible if the child is allowed to play with other children, which is so necessary for its normal, physical and mental development, to more than postpone most of the common and least dangerous of the diseases of childhood. We should try to remove mistaken ideas that so many parents have, who believe in deliberately exposing their children to these infections in order that the child may have them and get it over with. This practice is a little short of criminal. They should be taught that the mildest infections are capable of producing dangerous complications and sequelae. And especially is this true when

the child attacked has a lowered resistance due to nutriceanal disorders resulting from artificial feeding, or other causes.

The feeding of the runabout child on a properly selected and well balanced diet is the most important question that we have to consider in this paper.

Its gastro-intestinal tract not only bears considerable of the brunt of most infectious diseases, but the subject of growth and development is largely wrapped up in the question of feeding. This is where so many mothers fail. They seem to have more prejudice and less knowledge as to the selection and preparation of food suitable for the child than any other thing concerning its welfare.

According to the traditional ideas handed down from grandmother's time, the child should be fed on the same food given to the grown up members of the family. It is hard to make the parents appreciate the difference between the digestive ability of the child and that of the adult.

Grandma still believes in feeding them the old-fashion way. She will brag of the number of children she has raised this way, but she is stricken with circumscribed amnesia as to the number lost under her regime; or if she remembers, she blames the deaths to the second summer, worms, and that favorite cloak for all lay ignorant, teething.

Children of the runabout age should not eat at the table with the family until they have been trained to a proper diet, and not to ask, or expect to eat everything on the table.

The feeding of crackers, cakes, candy, or other things between meals, is the most frequent cause for loss of appetite at meal times. It is not surprising that the child should refuse more food when it is already filled up to the pre-sternal notch with this miscellaneous collection of trash.

We would suppose that in the South on account of the higher temperature and humidity during our long enervating summers, that the mortality from summer diarrhea would be higher than in the North. Zahorsky,⁸ discussing this subject on the statistical basis, shows, with the exception of certain cities on western coast, that the mortality of summer diarrhea is practically the same all over the United States. It is twice as high in summer as during the winter months. Summer diarrhea is not the effect of high atmospheric temperature alone, but it lowers the tolerance to carbo-hydrates and other elements of food. We must see cause of summer diarrhea, first in micro-organisms whose virulence and activity may be increased in summer; second in endo-

genic or ectogenic toxic substances of unknown nature.

It is during the summer that the combination of foolish mother and improperly fed child, with susceptible intestines, furnish us our first death from summer diarrhea.

The mother might be taught a much needed lesson by the sacrifice of her innocent child to her ignorance of dietetics but it is "blame" hard on the child.

The American soda fountain is not only dangerous for the runabout child, but is possibly the starting point for the widely known, bad American stomach. The habit of buying the child ice cream or other things to eat every time it is taken to town is a dangerous practice once begun, hard to break.

I have several death certificates to bear mute testimony to the danger to the runabout of ice cream with its high fat, and higher bacterial content, during hot weather. Strawberries, bananas, unripe fruit, fried corn, boiled cabbage; these have given me quite a number more.

It is nearly as important to know what not to feed the child, as it is to know the things that it can safely eat.

Holt⁹ says children should not have the following article: "Ham or pork in all forms, game, liver, etc., onions, radishes, cucumbers, tomatoes, beets, hot breads and sweet cakes, nuts, pies and pastery of every description, salads, jellies, syrups, candy, preserves, tea, coffee, stale or unripe fruit and many others that space forbids enumerating."

We must lay down broad principles of feeding and then adopt them to each individual child, keeping in mind the distinction between the healthy child with normal digestion, and the delicate child with its spoiled "pukey" stomach. We are not only confronted with a physiological, but a pathological problem as well.

The infant should be given a bottle of cow's milk daily at seven, or eight months, to train its stomach to digest it, for cow's milk is the foundation of all the diets prescribed for children during early life. Weaning can take place gradually by leaving off a breast feeding and substituting a meal of milk and cereal jelly in its place. Weaning, if otherwise possible, should never be attempted during the summer.

By adding one article of diet after another and watching its effect on the child's digestion, we can gradually approach intelligent omnivorousness.

We can no more expect the infant to change from a locivorous to a mixed diet, without slowly educating its stomach to do so, then we could change a butterfly from a

meal of nectar in the calix of a flower to one of ham and eggs, without marked alteration in its digestive organs.

While there is a difference of opinion as to the child's nutrinal requirements at this age, but if we assume according to Schlossman and Summerfeld,¹⁰ that if not over ten per cent of the necessary calories are supplied by proteids the other ninety per cent from carbo-hydrates and fats, or in the proportion of six or seven carbo-hydrates to one of fat. The child at two years should have a diet containing as follows, proteid 32.0 Gm. Fat 33.0 Gm. Carbo-hydrate 110 Gm, or about 885 calories for child of 12. 5 Kg., this would be 2.5 Gm. proteids and 71 calories per Kg.

According to Locke," on account of its greater activity, its rapid growth, its cells oxidizing a greater quantity of food and relatively more skin service than the adult, the child's demand for food is correspondingly increased.

On account of climatic and racial difference it is safer to follow American Pediatrician on the subject of diet. By selecting those articles of food upon which they, as a whole, mainly agree, we are less liable to make mistakes in selecting those articles of food suitable to the child's digestion and its nutritional requirements.

I am a firm believer in the printed diet list for the mother. It is not safe to trust to verbal instructions. It must be given her in black and white. I believe that the diet list used by Kerley is more adaptable to the digestive powers of our Southern children than any other that I am familiar with. I have used this diet as a frame work upon which I have arranged other articles suggested by many of the best known writers on the subject. The cooking of the food for the runabout is as important as the selection of the food itself. This is why I have made suggestions in this diet list as to the preparation or cooking of many of the articles allowed.

For lack of time, and to avoid being tedious, I will now pass out to you printed copies of a diet for the runabout child from one to three years of age, that you can read at your leisure.

Poverty with her handmaiden's prejudice, and ignorance, bad habits of training, failure of mother to obey orders, claiming child will not eat food ordered, or still hungry after feeding causing her to give other things, resulting in overfeeding and food injury, are some of the difficulties to be met and overcome by the physician in treating children.

He must be prepared to do verbal battle with family, relatives, meddlesome friends

and worst of all the dear old lady in the neighborhood (and every neighborhood has one) who will descend on the distracted mother during your absence and tell her of the babies you have starved to death, or otherwise killed, with your new fangled foolishness.

If in this paper I have succeeded in arousing your interest in child welfare work, and making you conscious of your responsibility for the education of the mothers in the care and feeding, etc., of their children, I will feel that I have not lifted my feeble voice in vain.

Vicatar Vaughn has rightly said "Man is first of all an animal." The first step in his betterment is the improvement in his physical condition, and, if I may add, it is our duty to see that each baby gets the proper start toward this physical perfection that means so much for the betterment of the human race.

1—Chapin. Theory and Practice of Infant Feeding, Chapter XXVII, page 303.

2—Kerley—Practice of Pediatrics, page 737.

3—Armstrong. The House Fly and Dineal Diseases Among Children, Jour. A. M. A., Jan. 17, 1914, page 200.

4—Rachford—Diseases of Children, page 9.

5—Rohrah—The Only Child. Pediatrics, 1911, Chapter XXIII, page 594.

6—Zahorsky. Golden Rules of Pediatrics, page 33.

7—Neumann. Pfaundler & Schlossmann. The Diseases of Children.

8—Zahorsky. Amer. Jour. dis Clued., 1913, Chapter VI, page 289.

9—Holt. Diseases of Infancy and Childhood, page 223.

10—Pfaundler & Schlossman, Vol. 1, page 461.

11—Locke. Food Values, page 10.

The Role of The General Practitioner in The Tuberculosis Problem of North Carolina.

By P. P. McCain, M. D., Assistant Superintendent State Sanatorium for the Treatment of Tuberculosis, Sanatorium, N. C.

In North Carolina there are approximately 20,000 cases of tuberculosis, and in our state alone there is a yearly death rate of 6,000 from this one disease. These truths when viewed in the light of the fact that tuberculosis is both preventable, and, in the early stages, curable should be a sufficient call to every physician in our state to throw himself unreservedly into the fight against this destroyer in the prime of their lives of one eighth of our population.

*Read at recent meeting of North Carolina Medical Society.

The problem of stamping it out seems at first sight so gigantic as to stagger the attempt; but when we see that in many sections, both of our own and of other counties, the death rate from tuberculosis has been reduced within the past ten to fifteen years from forty to fifty per cent, it not only seems a possibility but a likelihood that in the not far distant future North Carolina will gain an equal or even greater control over this dread disease. The problem has been long neglected throughout our whole Southland, and North Carolina should take her rightful position as leader among her sister states of the South to drive it from our midst.

The success of this campaign will necessitate enthusiasm on the part of every physician in our state, and will depend very largely on the co-operation of the general practitioner. By being ever on the alert to discover the disease in its incipency and by educating the public in the methods of prevention and the recognition of the early symptoms, the family physician will become in very deed the benefactor of his community and of his state.

One of the greatest drawbacks to the progress of the work and one of the first duties of the physician to correct is phthisiophobia, or the inordinate fear of the tuberculous patient. The public needs to be taught that there is little danger in contracting the disease except from patients who are careless. The hysterical belief that it is as contagious as small pox needs to be supplanted by an intelligent knowledge of its being infectious and communicable. The public needs to know that there is little or no danger in contracting the disease from the patient who shields his mouth on coughing and who expectorates in a receptacle which is afterwards burned. Recently one of our patients had occasion to go to a nearby town on the train. When the other passengers saw him expectorate in his pocket sputum cup, they all with one consent moved to the other extremity of the car. If he had spat on the floor there would have been no alarm. We need only to contrast the rather common incidence of entire households being wiped out by tuberculosis with the fact that in well conducted sanatoria healthy physicians, nurses and employees do not contract the disease to realize the crying need of intelligent precaution and the foolishness of inordinate fear.

One of the duties of the physician which is most practical and most far reaching in its results is to arouse the interest of the social, religious, and civic forces of his town or city in tuberculosis. No one can arouse this interest and awaken their en-

thusiasm so well as the physician. Through the medium of the public press, by making public addresses, and by appealing to Women's Clubs, civic authorities, Church societies, fraternal orders, and other such organizations, he can educate the public as to the proper methods of prevention, and he can press home the great need of providing for the proper care of those who are already infected. In every county and in every town of any size there should be an anti tuberculosis league, and it is upon the physician that we must depend for their organization.

One of the main advantages to be derived from an educational campaign is that it teaches the public to recognize the symptoms of the disease in its incipency; and when one with early tuberculosis realizes that he is not to be ostracized and shunned as a leper, he will apply to the physician for a diagnosis in a stage when he can be cured, and before all members of his family become infected.

The importance of an early diagnosis is so paramount in the eradication of tuberculosis that I wish to make its consideration the burden of this paper. Since tuberculosis is so prevalent in every locality and among every stratum of society, the attitude of the physician in reference to this death dealing disease should be one of eternal vigilance and suspicion. Formerly there has been too great a disposition on the part of both physician and patient to try to believe the case something else until the unmistakable symptoms of incurable consumption have become sadly evident and until by exposing other members of the family the victim has become a link in an interminable series of cases. With each days delay the patients chances of recovery are progressively jeopardized, while by making an early diagnosis the physician not only increases his chances of living by about seventy per cent, but he also decreases the probability of his becoming a source of infection to an even greater extent. This is true both because in the early stage of the disease the patient is much less likely to be a source of infection and because he can be taught before it is too late to take the proper precautions against infecting others.

In this connection it will be instructive to note the results of an investigation by Dr. Lamson, of the University of Minnesota, on the percentage of infections among the other members of the household where there was a patient with tuberculosis. His plan was to give them all the Von Pirquet tuberculin test. He found that in families where there was an open case sixty-seven per cent of the other members of the house-

hold showed evidence of tubercular infection; where there was a latent case, twenty-two per cent were infected; and where there was a case with a healed lesion, thirty-three per cent were infected. In families which were given the test as a control, where there were no cases of tuberculosis, only two and one half per cent responded.

The early diagnosis of tuberculosis is not a mysterious art possible of attainment only by the specialist. In most cases it is quite within the sphere of the careful and alert general practitioner and requires as a rule only a careful consideration of the symptoms and a thorough and systematic physical examination. If the physician, after careful study, is uncertain as to the diagnosis, it cannot be emphasized too strongly that it is his duty to advise the patient to consult a specialist.

The symptoms which occur early and which should always excite suspicion are malaise, languor, slight loss of weight and strength, slight afternoon fever, rapid pulse, lowered blood pressure, anorexia, and slight gastric disturbances, such as eructations and a sense of heaviness and fullness after eating. The more severe forms of gastric disturbances, productive cough, dyspnoea, profuse hemoptysis, and night sweats are symptoms which as a rule appear only after the disease has fastened its grip on its victim and are sufficient evidence without the aid of the physician to convince the sufferer of the diagnosis.

Occasionally the first evidence of tuberculosis either subjective or objective is hemoptysis, usually small in amount; and fortunate is the patient in whom this occurs, for he always consults a physician and is not only more easily convinced of the diagnosis, but is also more easily persuaded to take the proper treatment.

The only safe position for the physician to take in case of hemoptysis is to consider it of tubercular origin unless it can be definitely proven to be due to some other cause. It is a sad but not very infrequent occurrence to obtain a history from a far advanced case of tuberculosis of having had a hemorrhage even a year or more previously and of having been told by his physician that it came from his stomach or from the rupture of a vessel in his throat. In such an overwhelming majority of cases is hemoptysis due to tuberculosis that the burden of proof should be on any other origin.

Pleurisy and anal fistula, while they frequently occur during the course of tuberculosis, are also very often the first clinical evidence of a tubercular focus; and although neither is always tubercular, they are so frequently so that they should arouse

the suspicion of the physician and cause him not only to make a thorough search for evidences of tuberculosis elsewhere, but also to warn the patient of the probability of its being tubercular and to acquaint him thoroughly with the symptoms of tuberculosis for which he should constantly be on the lookout.

The importance of an accurate temperature and pulse record in the early diagnosis of tuberculosis can not be too strongly emphasized, and its importance depends largely upon its being taken at least every three or four hours for at least a week. It is out of the question for the busy general practitioner to do this himself, but there is rarely found a home where there is not some one of sufficient intelligence to be capable of being taught how to take and record the temperature and pulse accurately. If taken only once or even twice each day, the characteristic temperature curve—normal or sub-normal in the morning with an afternoon or evening rise—may be entirely missed, since the elevation lasts sometimes only for a few hours. A normal or sub-normal morning temperature with even a slight afternoon or evening rise should arouse the suspicion and stimulate vigilance on the part of the physician, especially if it should become normal after rest in bed and become elevated again after exercise. Such a temperature curve in combination with a rapid pulse and lowered blood pressure needs little else to make a positive diagnosis of tuberculosis.

The general practitioner is as a rule too busy to make a thorough and complete physical examination of every patient whom he sees, but no physician should allow himself to become so busy as not to examine thoroughly the chest of every patient who gives a history of symptoms in the least suggestive of tuberculosis. He is otherwise untrue to his professional obligations. If he is systematic he can be thorough and yet consume only a short time in the examination. Rarely will it require more than one half to three quarters of an hour.

It is not within the scope of this paper to discuss the details of the chest examinations. This can be found in any good work on tuberculosis or physical diagnosis. The two points in the examination which I do wish to emphasize are the necessity of stripping the chest to the skin and the importance of the expiratory cough.

The *sine qua non* of every chest examination is having the chest stripped to the skin. It is impossible to detect signs of early tuberculosis through any covering whatsoever. If the physician, without the least hesitation, says it is absolutely essen-

tial to have the chest stripped, and if, after providing a chest blanket or sheet, he leaves the room for the patient to undress, even the most modest of ladies will rarely raise any objection. By shifting the blanket or sheet every part of the chest can be examined thoroughly with but little exposure and embarrassment to the patient. So important is this that unless the patient is willing to comply, the physician should refuse to make the examination or to have anything further to do with the case.

In inquiring of the patients who have come under my observation during my sanatorium experience as to the steps taken by their physicians in arriving at a diagnosis, I find that one of the most commonly neglected steps is to have the patient cough. This cough will frequently reveal rales which cannot otherwise be heard, and will thus enable the physician to make a diagnosis before the more evident signs of consolidation or extensive infiltration appear. The main value of the cough depends upon its being elicited at the proper stage in the respiratory cycle. The cough should come at the end of expiration, and the rales are most likely to be heard during or at the end of the deep inspiration following this cough. A point of practical value also is to have the patient inspire through his mouth instead of through his nose both during the stage of coughing and throughout the whole examination.

In early tuberculosis there is usually no expectoration. But if there is any whatsoever, the physician is criminally negligent where the diagnosis is the least doubtful unless he either examines it himself or has it done at some good laboratory; and if negative, repeated examinations should be made. Even if repeated examinations are negative, however, one is not justified in excluding tuberculosis on this score alone, since frequently in early cases and even occasionally in the far advanced, no bacilli can be found. There is far too great a danger for both physician and patient to feel secure simply because of a negative sputum examination.

But the physician's duty and responsibility have not ended when he has made a diagnosis and instituted the proper treatment for his patient. If tuberculosis is to be wiped out or even appreciably checked, he must find out how many and to what extent the other members of the family or of those exposed by his patient are infected. If a case of small-pox should come under his care, no physician would think of doing otherwise than of vaccinating everyone in the house. And to no less a degree has a physician discharged his obligation in handling a case of tuberculosis

until he has done all within his power to discover and prevent the development or progress of infection in everyone exposed.

A practical and effective procedure is to give the Von Pirquet test to all members of the family, and to subject all who respond to a thorough examination. Of course, all who respond will not necessarily have active trouble, but it will enable the physician to discover in their incipency many cases that are active, and will make it easier for him to impress upon them the fact that they have tuberculosis and that they need to take the treatment. It will also impress upon those who respond but who have no active trouble the necessity of a careful and hygienic mode of life in order to prevent a latent focus from becoming an active one.

Since it has been proven beyond a doubt that early tuberculosis is curable, the physician need no longer hesitate to deal in all candor with his patient. I have yet to see the patient who did not appreciate being told frankly of the diagnosis, but I have seen many who condemn their physician for not having told them of their trouble as soon as he found it out. The passage of the law requiring that every case be reported is one of the greatest advances yet made by our state in handling the tuberculosis problem.

The one point in the treatment of tuberculosis which needs most to be impressed upon the general practitioner is the importance of keeping the patient constantly in bed until all active symptoms have subsided. Every patient with a temperature of 100 at any time during the day should be kept constantly in bed and those with 101 or over should be kept at absolute rest in bed until several days after their temperature has become normal. The value of fresh air and nourishing food has been so widely heralded that it is comparatively easy to get the patient to accept them as essentials to a cure. It will require the utmost earnestness and firmness, however, on the part of the physician to get the patient to realize the necessity of rest; and it is largely due to the failure to enforce this most important essential that the sanatorium yields so much better results than home treatment.

A Plea for More Rigid Asepsis in Obstetric Work.*

By A. Bascom Croom, M.D., Maxton, N. C.

In this day of earnest study and diligent preparation in all the lines of our profession it would seem presumptuous, un-called for

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and absolutely unnecessary to bring before this body of intelligent men so simple a subject to engage our thoughts for even a few minutes; yet I am convinced that while the necessity for perfect asepsis is recognized in a general way that the details are often neglected and as a result we are still finding among our women patients those pelvic complications in later life which date back to a confinement with an improper technic.

These cases are in a great measure the ones attended by the ignorant mid-wife, the responsibility of which is upon the midwife, but more so upon the family that employs her; yet I wish to point out that in a large degree the responsibility is indirectly upon the profession and especially the family practitioner whose duty it is to enlighten the public in matters of this kind.

The only remedy here is the elimination of the midwife except as a helper to the obstetrician and then only the intelligent ones who are registered as such after proper instruction and training.

We have all seen the evils of this woman who is usually the most ignorant and the dirtiest negro in her section and I feel safe in predicting that within a few years we shall be able to accomplish the relegation of her type to the proper place.

The general practitioner is the man who attends these cases and while we might picture the ideal condition with the obstetrician as a specialist we must admit that many years will lapse before this work falls entirely to the specialist and therefore it is to be dealt with by the general man. Let us look squarely at the situation and deal honestly with it. We all know and, as I have said, we all practice in a general way a strict asepsis; but the question is do we exercise in detail the strict technic we know to be necessary to obtain most perfect results?

Without assuming to criticize the other man would it not be well worth a few minutes of our time to review some recent cases attended to see if we have omitted any points of importance in our obstetric technic? Have we made proper arrangements previous to confinement, such as providing sterile sheets, towels, perineal pads etc?

In my opinion the preliminary preparations should, wherever practicable, be placing the patient in the maternity department of a well-regulated hospital: then all preparations are at hand without providing them for the individual case. Especially is this true when instrumental delivery or any interference of the normal functions are anticipated. Hospital facilities should be provided for these cases and the obstetrician should insist upon having them.

Where it is not practicable the delivery room of the patient's home should be properly arranged for lights and everything possible to contribute to a good technic.

Having the case in active labor either in the home or the hospital let us see if we are prepared for the surgical condition. Have we washed our hands and made other preparations as in other surgical conditions? This should be done even where a normal labor is expected, for how can we be sure that some abnormal turn will not come?

Scrub the hands with brush and soap, use your antiseptics and then to be sure of asepsis employ the sterile rubber gloves.

Of equal importance also is the preparation of the patient, the field of operation; for to render ourselves sterile and leave the patient unprepared is doing only half the duty required of us.

It is our duty of course to prevent a tear of perineum or cervix, but suppose it should occur. Then how about it's repair under improper aseptic surroundings? I take it that none of us now contend that the obstetrician has fully discharged his duty who leaves a patient with a torn cervix or especially a torn perineum. Have the case so completely at your command that an immediate repair can be done without fear of infection. And this point could not be passed over without a reference to the trained nurse who should be at hand in all cases and who is absolutely indispensable where a perineorrhomy is done.

Proper preparation of patient and operator, carefully performed operation and perfect technic all count for nothing where the case is turned over to some party ignorant of or not familiar with the care of such cases. The after-treatment is, therefore, of prime importance and if neglected we have again imperfectly served the case.

As these most important details are recalled can we sit quietly around and sound no word of warning to the midwife patron? Can we agree to assume the responsibility of attending these cases with imperfect preparations or facilities for meeting possible emergencies?

Are we willing to argue the physiological functions, saying nature will take care of the situation and thereby fool ourselves into the "do-nothing" idea? Have we been guilty of depending upon nature too much and when an abnormal condition arose found ourselves absolutely unprepared to handle it? If so, my dear doctor friends, let me urge that we consider now the seriousness of the situation and the responsibilities which confront us in this class of work and even tho' it is a simple thing and something we all know and in a way practice, is it not true that by exercising more

care and preserving a perfectly aseptic technique that we can materially decrease the number of puerperal infections and save subsequent pelvic operations, much suffering and even many lives?

Safety First In Surgery.

Chas. T. Harper, M. D., Wilmington, N. C.

In all avocations and professions the pursuit of which is attended with danger to human life, there has recently developed on the part of those exercising supervision and control thereof a determination to adopt as a motto: "Safety First." This determination is based not only upon the desire to meet the demand emanating from the public which is to be served, but as well upon the sound moral and economic considerations involved in all human activity. And it is matter of common knowledge that by the adoption and enforcement of rules requiring more frequent inspection of men and equipment, more rigid examinations into fitness of employees better trained men, and the installation of safety appliances, the risks to life and limb are being daily lessened or entirely eliminated in many of the industrial operations of the world.

This new spirit or idea, if it may be so called, undoubtedly contributes to the happiness and well-being of society in direct proposition to the extent it pervades the administration of the various affairs of man.

There is no calling or profession in which the motto, "Safety First," is of such profound significance as in that of surgery. The danger attending operative surgery are so many, so insidious and so menacing; the practice of the profession so frequently, and indeed so constantly involves the necessity of taking the patient to the very borderland between life and death; that every consideration of morality, of humanity, of justice, and even of self-interest and pride in achievement, requires the adoption of every safeguard and precaution that is available.

The demand for this does not come from the public which so confidently relies upon us, and which is, for the most part, comparatively ignorant of both the dangers and the means of lessening them, but it is none the less urgent and compelling because it is born only of our inner consciousness and our ideas of duty. And it is well for us to keep the suggested motto constantly in our minds.

To the cultivated members of our profession the few suggestions I propose to make will, perhaps, contain no new

thought. They are neither novel nor startling; but they may be likened to those moral truisms which lose nothing of their truth by repetition and which cannot be too often called to mind.

The wonderful advance in operative surgery during recent years, which has been fairly well exploited, has to some extent allayed the layman's natural terror of "the knife," and has caused patients and physicians alike to more frequently and more readily seek desired relief by means of surgical operations. And the growing frequency with which requests are made by patients, and even by physicians referring surgical cases, for immediate operations, and the danger of careless compliance with such requests in all elective cases, is my excuse for directing your attention anew to a few well understood, but frequently disregarded, considerations which should govern in all such cases. If these considerations were more constantly held in mind by both physician and surgeon they would materially lessen the number of operative cases in which the results are disappointing.

In all elective cases presenting themselves for surgical operations, the pathological condition of the patient is the surgeon's first consideration.

Under modern methods pathological conditions may be elicited with reasonable accuracy. This requires, however, careful and painstaking physical examinations; the careful investigation of the patient's history and his family history; close inquiry into his habits of life; careful and repeated tests of the functional capacity of the different organs; the examination of the blood; the careful scrutiny and analysis of the secretions and excretions. All this naturally takes time; and frequently the examinations and analyses must be repeated for comparisons and for verification. But failure to make the investigations as to any one of these matters or conditions may be attended with grave risks which should not be needlessly incurred.

The many methods which have been devised for the scientific examinations of patients, involving the use of the numerous vaccines which have been discovered, the variously prepared blood sera, the chemical and microscopical laboratory tests, and the many ingenious instruments for the exploration and examination of the different organs of the body, are so helpful in diagnosis that they should be employed in all cases where it is possible to obtain their assistance. The precision with which one is enabled to determine a diseased organ by the use of these instruments and laboratory tests has done much to remove this branch

*Read before recent meeting of North Carolina Medical Society.

of our profession from the realm of mere speculation and has placed it much nearer that of the exact sciences.

Of course it cannot be expected that every practitioner can have at his hand all these scientific agencies, any more than every lawyer can expect to have all the law books in his own office. But even as the careful lawyer, whenever possible, seeks access to established libraries to supplement his own private equipment, so the careful diagnostician should, whenever possible, seek all the helpful appliances that may be available to his established institutions, to supplement his own less perfectly equipped consultation room.

One who performs surgical operations only infrequently, and especially when he operates outside of regular and well appointed hospitals, in which it is mere routine to observe the precautions herein outlined, is apt to neglect these tests and examinations, or, at least, to minimize their importance. This is grave error. Such neglect, except in exigent cases, is a failure to prepare the economy for the trying ordeal of surgical procedure. It is a disregard of the motto, "Safety First."

If, upon the examinations and tests therein urged, there is disclosed serious disease of the organs, aside from the condition to be relieved by the operation; or if the blood is found to be seriously impaired, these conditions should be relieved first. Rest, diet, medication and even climatic treatment should be resorted to in the effort to restore normal conditions, as far as possible, before any operative procedure is undertaken.

It is difficult to conceive of degrees of care in matters so vitally important as anesthetization; but especial care should be observed by the anesthetist in cases where an organ is found to be diseased. And the surgeon should limit his operation to the very shortest time possible consistent with careful and thorough work. The strain of an operation upon a patient is severe at best; it is of course extra hazardous where it is levied upon organs weakened by disease.

As a rule, long continued treatment, preparatory to an operation, is to be avoided, if possible. Especially is this true where the treatment is given in a hospital where the mental condition of the patient is more likely to be disturbed by his unaccustomed surroundings. A short and simple preparation, which serves to put the kidneys, skin and alimentary canal in a state favorable for the elimination of waste products, is much to be preferred and will leave the patient in a more favorable condition for a surgical procedure.

It not infrequently happens in the practice of surgeons of wide experience that patients are referred to him for operation when he cannot discover the indication therefor; when the advisability of the operation is doubtful, and, in some instances, even contra-indicated. Of course in all such cases wisdom and a proper regard for the patient's safety dictate that he should be referred to his physician for medical treatment and for further observation and investigation.

There is, perhaps, no profession in which special training, peculiar fitness and definite experience and personal skill count for so much as in that of operative surgery. There are scores of surgeons who daily perform the most difficult and delicate operations, for which they are especially fitted and trained, with almost uniform success. The same operations upon the same patients in the hands of less skilled and experienced surgeons would become much more grave; and would very probably be attended with less successful results. This is but another way of repeating the truism that all cases should be referred to surgeons of proved competency.

It is a well-known fact that many brilliant operations have been successfully performed under most adverse conditions and amidst very unsanitary surroundings, and with inadequate assistants. Yet no careful surgeon would ever choose to operate under such conditions. Rather would he, very properly, refuse to do so except in the most exigent circumstances.

Every surgical procedure, so far as possible, should be conducted in a modern hospital in which a trained staff of assistants is maintained and which has a fully equipped operating room with an abundance of light and room with the most complete arrangements for sterilization and prevention of infection. And above all, the surgeon himself should approach no operation until he has taken every possible precaution to render himself aseptic. The most perfectly appointed operating room, and the best equipped clinical assistants cannot prevent the septic surgeon from advertising his negligence by the suppurating in the patient's wound.

The trained anesthetist is an indispensable member of the surgeon's staff. He is the surgeon's "right bower." It follows that he should be selected with care; that he should be especially trained for his important service; and that he should possess especial knowledge of the proper anesthetic to be used in the various cases in which he serves. It is only upon such an expert that the surgeon can rely with confidence so that he may give his whole and

undivided attention to his own special work in the operation.

The practice of performing multiple operations at one "sitting" has become a mere matter of routine work in many hospitals today. Yet it is a practice which is to be severely deprecated except in really urgent cases. A single operation is a severe strain upon the vital organs, and this strain should not be increased if it can be avoided. In any event multiple operations should not be undertaken except after a thorough examination of the patient's ability to stand the specific extra tax upon his vitality. A disregard of this precaution generally leads to a lingering and tedious convalescence and frequently to real disaster.

I realize afresh, now, that I have concluded my brief paper, that I have brought you no new message. I am conscious of the fact that I have not presented the old matter in any new and attractive form. But my surgical experience has taught me the vital importance of every one of the elementary suggestions which I have presented to you, and I am content to hope that the repetition of such good, sound surgical doctrine cannot fail to be productive of some good. And I trust that it may lose nothing of its effect because I have adopted a subject more frequently heard in railroad circles than in Medical Society meetings. In my opinion it is more appropriate here than anywhere else, for I believe our professional slogan in all dignity and seriousness, might well be—"Safety First."

Preventive Appendectomy.*

H. S. Lott, M. D., Winston-Salem, N. C.

Surgery comes to us in eras. The old perityphlitis of Gross, with the causative focus unrecognized, marked the era of ignorance, as to real and fatal pathology. In this era, made bold by a clinical picture which established the presence of pus, to "stab and run," was the height of surgical attainment. Becoming interested in these distressing fatalities, the anatomists located the primary focus in the vermiform appendix, with the resultant masterful grouping of symptoms, styled "fulminating appendicitis," so graphically pictured by Hunter McGuire, that a diagnosis could really be made with "the toe," and in which prompt surgery and thorough drainage saved the patient.

Just here, in the evolution of appendiceal

surgery, matters became chaotic—that awful "pendulum" swinging between the man who had the courage to remove the appendix, and cleanse, and drain the abdominal cavity, and the man who had not. Both operators are working to-day, and will be always, and the patient is the shuttle-cock between the two.

However, from out this chaos, with its tedious convalescence, its distorting sequelae, and distressing fatalities, an appeal went forth to the "man in the field" for early recognition and prompt removal of the focus, with a sympathetic response which is the essential factor in establishing preventive surgery.

Within the next era, and early among the findings of intra-abdominal explorations, made possible by the perfect toilet, and dainty technique of Listerism, were Lane's kink, and Jackson's membrane, with also a recognition of its lumen, of interference with the normal peristalsis of the gut; while close within their wake, and of greater import, because of its wider scope, and broader field of adaption, comes the teaching of Robt. T. Morris, telling us of "adventitious tissues within the abdomen," and "cobwebs in the attic," of either intrinsic origin, and arising from autoinfection, or of the extrinsic origin, and dating from embryonic life, wherein faulty involution and failure in resorption of formative membrane, starts the constricting and immobilizing cycle.

Such tissue bands within the abdomen offer danger possibilities from pathologic foci, of two kinds; first, by mechanical constriction, the circulation is obstructed, at a cost to both the nutrition and the vitality of the part. With age, and a loss, perhaps, of a portion of the fluid content of these bands, the constriction from fibrous tissue, becomes not less, but greater in degree. Second, and of equal danger, because of its disturbances of function, normal peristalsis is prevented by welding of the cavity.

Thus grouped, these mechanical causes both favor and invite chains of symptoms occurring in cycles, marked by flatulence, constipation and pain, and always cloaked by the obscurity attending disturbances of digestion.

At the Providence meeting last September, of the American Association of Obstetricians and Gynaecologists, the author presented the subject of "Appendicitis in Young Women," with the hope of emphasizing the importance, and the obscurity of "right sided" pain in these patients. Two cases were cited in which, although a classic group of symptoms had justified operation, the appendices were apparently

*Read before recent meeting of North Carolina Medical Society.

normal, and adhesive bands, if existing, were not discovered. Furthermore, the patients were not relieved, and continued to have pain, in recurrent attacks, and accompanied by obstinate constipation (see *American Journal of Obstetrics and Diseases of Women and Children*, Vol. LXVIII, No. 5, 1913). However, subsequent history of these cases indicates the existence of constricting, and especially of welding bands, that further exploration would have revealed them, and that their freeing would have given more gratifying results.

During the past year, and since making this report, several cases have come to me with a diagnosis of "appendicitis." The diagnosis in each case was made by a competent man; and accepting it as true, the patient subjected to operation. First, to impress me, upon entering the cavity, was the fact that the appendix was difficult to locate. Next, when the feel had indicated its location, that the caecum, and adjacent bowel were not free; requiring much effort, and some time, to bring the appendix into view. When this had been accomplished, an inspection of the "little assassin" (Price) would reveal the fact that it was free from active inflammation; with, seemingly, no constriction of its lumen; but, in most cases exceedingly long, and welded to the bowel from base to tip; with a web of tissue for its entire length, and opposite the meso. attachment, giving, for all the world, an appearance like the webbing of a duck's foot as it goes between the toes. On passing the hand about the locality, as far as the fingers could reach, obstructive bands were found, seemingly sufficient to prevent rotation of the bowel, and promising also grave interference with normal peristalsis.

In each of these cases, the binding tissues were severed and the appendix dissected from its fixation to the bowel, and removed, with primary closure, of course, as the cases were clean. Marking the convalescence in these cases, which was otherwise uneventful; pain, within the first forty-eight hours, was a prominent feature, requiring a palliative. For this pain, there is a reason; lying first, perhaps, in extent of territory throughout which repair of raw surface is in progress; and also in resentment on the part of the "highly irritated sympathetic nerve ganglia in this region" (Morris). Since operation, these patients, being of both sexes, have improved. The crises of pain have disappeared; and the constipation, flatulence, and other disturbances of digestion are less marked.

And now, just one thought has come to me in the matter of handling these cases, and it is this: with a fair certainty of dia-

gnosis, refinement of which is the acme of professional attainment, and the chance of pus eliminated; to reach them through a free *right-rectue* incision, giving ample room for both inspection and work, in freeing constricting bands, and in removing the appendix, would simplify the operation very much, and give us better promise for its outcome. As to method of removal of the appendix, with a perfect toilet, and simple technique, there is really little choice, the chief aim being an avoidance of dead space, dead ligature or stump in bowel wall at the site of its removal, and in effecting the least amount of anatomical disortion to either its lumen, or the arrangement of the muscular fibers which control the peristaltic function of the caecum.

Bearing these points in mind, it really seems to me like a herald of the dawn of Ideal Preventive Surgery, in which era we will remove the causative conditions productive of the distorting and fatal pus cases; with their distressing clinical picture before operation, the trying ordeal at the time, and the tendious convalescence afterward.

Report of a Case of Tetanus, Developing Five Days After Confinement of Twin Pregnancy.*

J. V. McGougan, M. D., Fayettevill, N. C.

In the beginning I wish to state that my knowledge of this case is very superficial and I wish to take this opportunity to thank Dr. J. F. Highsmith, to whose hospital this patient was brought for delivery, for the privilege of reporting this case. I do not report this case as a curiosity, but after searching literature carefully, I find that up to 1890 the number of cases of tetanus developing after operation, including intra and extra abdominal operations were 101. I would also state that up to this time we did not have the use of antitetanic serum and from 1890 to 1909 there were 49 cases more, making a total of 150. It is interesting to note that in these very extensive reports up to 1909 there had not been a single case developing in obstatrical practice. Therefore, it is for this reason that I wish to report this case before the Society for the benefit of its members in the treatment of such cases as I shall report.

CASE REPORT

M. C. Age, 25. Negro. Was admitted to the Highsmith Hospital on the 5-15-14 p. m. Was in labor for four days previous to admittance to the hospital. At the close,

*Read before recent meeting of North Carolina Medical Society,

of the second day the membranes ruptured. She was examined at the close of the fourth day for the first time and there was found to be a hand protruding with the probability of twin pregnancy. The patient being in a small room and the accommodations very poor it was deemed best to place her in the hospital where she could receive aseptic treatment. Upon examination at the hospital there was found, as stated above, presenting hand, vulva intensely swollen and edematous. All parts showed signs of congestion. She was given a small quantity of chloroform and the child was delivered without difficulty by version. This child was dead and evidently had been dead for a number of hours. Immediately the presence of the second child was diagnosed and delivered in a similar way. This child is living and doing well. Patient reacted, lochia normal and it looked as though she would make an unevenful recovery. Temperature ranged from 99 to 99.5 until the fourth day at which time her temperature was normal during the entire day. On the morning of the fifth day the patient complained of soreness in the muscles of the neck, headache and pain in the dorsal region of the back. Tetanus not being suspected, an anti-septic mouth wash was ordered and a purgative administered. On the following morning or the sixth day of convalescence she first manifested stiffness of the jaw and it was at that time that a diagnosis of tetanus was made. Immediately she received 6,000 units of antitetanic serum, also morphine, bromides and chloral, all of which were of no avail. The disease rapidly progressed and the patient developed Opisthotonos and died twenty-four hours later, which made it at the close of the seventh day of convalescence, or the second day of the disease.

A factor of much interest in this case was the apparent development of prodromal symptoms of tetanus in three persons in the hospital who were slightly exposed to this infection, two of them being nurses. These symptoms were identically those of which the colored woman complained, viz.: fever 99 to 100, sore throat which was negative upon examination, soreness in the muscles of the neck, pain in the back of the head and dorsal region of the spine. Of course I cannot say definitely that these symptoms were due to tetanic infection but these people, being ignorant of the symptoms of the disease, all described so perfectly the same line of symptoms as the woman who truly developed tetanus, that the suspicion was so great and the fear of the disease so intense, that Dr. J. F. Highsmith advised the administration of an immunizing dose of antitetanic serum of 1,500 units

to be given to each of the three. Such orders were carried out and all symptoms were relieved within eight hours after the administration of the serum.

Upon reviewing the statistics of the past twenty years, it has been proven by the numerous cases reported that the majority of the cases develop from the seventh to the eleventh day of the post-operative convalescence two-thirds to four-fifths of all cases develop from the seventh to the ninth day. This case developed on the fifth day. Cases have been reported developing as late as the twenty-fifth day.

As to the cause of the source of infection in this case it is impossible to state specifically, however, considering the surroundings of the patient and the fact that she was in labor for three days without attention, the membranes having ruptured two days before delivery with prolapse of the hand, I think there is no doubt but that infection was present before coming to the hospital and was received in the patient's home, in all probability, gaining entrance through some traumatic area of the vulva.

In all cases of post operative tetanus there is not a single instance where surgery has not placed the blame of infection upon the use of improperly prepared cat gut, there being no cat gut or sutures of any kind used in this case, this cause is absolutely eliminated.

Treatment. In the beginning I want to urge every one of you that in all cases in which there is a possibility of tetanus infection in any portions of the body, whether in obstetrical practice, surgery, gun shot wounds, or wounds of any nature, that no one ever loses anything by administering an immunizing dose of antitetanic serum or at least to recommend its use even though the patient refuses the use of this agent. Once the disease has manifested itself, the antitetanic serum is of no value more than to neutralize the toxins which are being produced and prevent their effect upon the nervous system, these of course, being the tissues of the body which are most affected by the tetanus bacillus and its toxins.

Prognosis.—Up to 1890, as stated above, we did not have the use of antitetanic serum. In a total number of 101 cases the mortality was 94 per cent, in 49 cases which have been treated since 1890, 43 of them having received antitetanic serum, the mortality was 88.5, making a difference of 5.5 per cent. Of course this means the use of antitetanic serum after the disease has once developed. While the difference in mortality is not a great one, yet considering the character of the disease, it is always worth while to use all the available means of treatment. Other means of treatment are

used to control the spasmodic conditions of the muscles and only relieve the symptoms and do not act as curative agents. These are chloretone in large doses. Morphine, bromides, chloral and the subarachnoid injection of a solution of magnesium sulphate has been recommended but its power to paralyze the respiratory system is so great that its use is not warranted. The prognosis depends to a great extent upon the time of occurrence of the disease and the rapidity of its symptoms which are indicators as to the severity of the infection and the failure to respond to antitetanic serum and other means of treatment. There is no case on record developing within the first two days following operation. The sooner the case develops the more fatal the disease and the later the development the more favorable.

The Sources of Infection by Tubercle Bacilli.*

By Mary E. Lapham, M.D., Highlands Camp Sanatorium, Highlands, N. C.

There is a family of saprophytic acid fast bacilli universally distributed throughout nature and living on the most varied forms of plant life. Möller has described the acid fast bacilli growing on timothy and manures; Rabinowitsch, that of butter; Weber, that of Moss, and Lubarsch, the grass. It has been shown that the infinite variations of the hosts upon which they live, and the difference in the superficial characteristics differentiating the members of this family are due to their environment and not to a distinct origin. Vast as this family is, and widely separated as their differentiation has caused them to be, they are all members of the same great family; all related to each other by well marked biological characteristics. In many respects they resemble the actinomycetes but have been classified under the trichomycetes: the characteristics of this family are: resistance to alcohol and acid fast staining properties; the passing into involution forms under disadvantageous circumstances; the branching and bulbous forms; the osmotic swellings; the ability to furnish an extract that will provoke a specific reaction when injected into any animal defending itself against any member of this family; and the ability to provoke the production of tubercles when inoculated into an animal. Lubarsch inoculated the kidney of a rabbit with a culture of grass bacilli and after thirteen days found that

the capsule of the kidney was adherent to its surroundings and infiltrated with caseous material. The kidney contained conglomerate tubercles composed of large epithelioid cells and giant cells with the acid fast bacilli radiating out from the center in a typical manner. Lubarsch made a still more interesting experiment by inoculating a rabbit with the tubercle bacilli of birds and then after the effects were overcome, injecting a culture of grass bacilli into an artery. A few days later, the fore legs were paralyzed and the head could not be held erect. How shall we interpret this phenomenon? The injury caused by tubercle bacilli was being overcome when an inoculation of acid fast, saprophytic bacilli living on grasses, caused an exacerbation excelling in intensity the original inoculation. The rabbit died after 45 days and generally distributed throughout all the organs were typical tubercles that could in no way be distinguished from those caused by the bacillus of Koch. Lubarsch inoculated his arm with a culture of grass bacilli and gave the resulting small, round prominences to a celebrated surgeon for diagnosis who pronounced them typical tubercles exactly like those caused by the inoculations received in making autopsies. As a result of exhaustive studies, Lubarsch concluded that all acid fast bacilli, no matter where found, are genetically related and belong to one family. This includes tubercle bacilli with the other acid fast bacilli in their classification as trichomycetes. That tubercles can be induced in any animal by the inoculation of any saprophytic acid fast bacillus, has been demonstrated by Ramond, Herzog, Terre, Lubarsch and many others. It has been shown by Weber, Taute, and others, that acid fast bacilli are regularly present in the bodies of cold blooded animals as part and parcel of the regular phenomena of their existence. For the greater part, these residents are harmless, but occasionally they assume pathogenic properties and provoke the production of tubercles. It seems justifiable to assume that the spontaneous tuberculosis of fish and frogs and snakes and other cold blooded animals was not due to infection from some other case, but rather to the change from harmless to harmful residents of these acid fast bacilli that are always present in their tissues. Why are these bacilli so constantly present in cold blooded animals? Is it because of their universal presence in the water and food? Do these acid fast bacilli reside in the tissues of warm blooded animals for the same reasons? We know that they are present in

*Read before recent meeting of North Carolina Medical Society.

the blood and lymph and various excretions when not a trace of clinical tuberculosis can be found, and that their presence does not seem to injuriously affect their host. Reports are constantly coming in that acid fast bacilli have been found in the blood of perfectly healthy human beings and in the feces and even urine and sputum. If traces of tuberculosis are found, we say they are tubercle bacilli: if there are no traces, we say that they must be "acid fast bacilli" and unassociated with tuberculosis. Perhaps a broader point of view would be to say that the presence of acid fast bacilli in the bodies of mammals and other warm blooded animals was of very frequent occurrence and had no diagnostic significance, but that it would be well to know whether these same acid fast bacilli that are usually so harmless, could initiate tuberculous processes. It is a poor way to classify them simply by the presence or absence of tuberculous processes. It would be well to know the relationship between these residents of warm and cold blooded animals and the acid fast saprophytic bacilli living in the fields and running water and even getting into the distilled water of our laboratories. Why should an extract made from the acid fast bacilli growing on timothy provoke a specific "tuberculin" reaction when injected into any tuberculous animal, including man? Why do these acid fast saprophytes provoke a tuberculin reaction, cause the production of tubercles, and why are they always present in all tubercles of all animals?

We are in the habit of speaking of the acid fast bacilli causing the tuberculosis of human beings as "tubercle bacilli" and designating all other acid fast bacilli causing the production of tubercles in other animals by the name of their host. Thus the tubercle bacilli proper are only those equally related to the tubercles of man; those of cows are bovine, of birds, avian, and those of other animals, are given their name. There is no reason why one acid fast bacillus is any more a tubercle bacillus than any other. They all belong to the same family and some have acquired the cultural characteristics due to long residence in man, others in cows, etc., but none has the right to be distinguished as the tubercle bacillus and all the others receive different designations. The acid fast bacillus of the tubercle in cold blooded animals is just as much a tubercle bacillus as that of man. Nor should we speak of the pseudo-tuberculosis of the cold blooded animals but recognize the fact that throughout the animal world there is a disease characterized by

the production of tubercles and always accompanied by the presence of acid fast bacilli in these tubercles, so that all are manifestations of the same original source, and all are derived from the same family. The constant presence of acid fast bacilli in the tissues of cold blooded animals can be ocularly demonstrated any day, but human beings are not as accessible to this method of demonstration. Fortunately we have a method that efficiently demonstrates their presence with little trouble and no danger. Thanks to the Von Pirquet reactions, we can prove that this phenomenon so true of the lower animals, is equally true of mankind. We know that practically all children are infected with tubercle bacilli by the time they reach maturity and that this presence as a rule is harmless and only becomes dangerous in from one to two per cent. In an experimental study of heredity in bovine tuberculosis, by Brooks, 420 animals were studied with 300 of them tuberculous. It was found that "Practically all the world's records as to fertility, milk and cream production are held by animals either themselves thus infected or who are the offspring of tuberculous ancestry." Ryder says that "At the post mortem examinations held by the bureau inspectors over a consecutive period on 120,000 hog carcasses, 93.3 per cent were found to contain lesions in the superior cervical glands (in almost all cases the submaxillary gland)." What is the meaning of this universal infection by tubercle bacilli of hogs and cows and man? Is this universal fact due in each case to derivation from a preceding case or is there some fundamental, underlying factor that has not yet been appreciated? Is this vast mass of infections due to "exposure" or to some biological factor inseparably associated with life itself?

If it can be shown that the presence of tubercle bacilli within the human body is analogous to the presence of colon bacilli and equally unavoidable, it will follow that the best way to prevent the extension of tuberculous processes will be to detect them in time. If it can be shown that "tubercle" bacilli are as constantly present as colon bacilli and that there is the same possibility of their assuming pathogenic properties at any time, then the logical way for us to protect ourselves against this potential danger is to discover it in time. Unlike the pathological consequences of colon bacilli, those of tubercle bacilli do not declare themselves to the subject of this danger. There is as a rule no warning of the momentous change that has occurred and for years this danger may develop without giving the slightest hint of its presence until

recovery is difficult or impossible. If there was pain or discomfort or loss of weight or strength or cough or temperature or any single suggestion of the creeping, crawling menace threading its way through the lungs, the victim would be put on his guard and the danger detected. Only too often no hint is given and the processes work their way while the victim remains in perfect health until almost the very end. Only too often the Doctor finds the evil when it is too late and the end has come. Perhaps the most fatal characteristic of the disease is its perfect compatibility with good health and working capacity. We admit that the huge death rate from tuberculosis is due to delayed diagnoses and that these deaths could be avoided if we could discover the danger in time. The prevention of tuberculosis does not so much consist in the prevention of exposure and protection against an infection inevitably and persistently resident, but in a systematic plan to detect the change from harmless to malignant conditions in time to overcome them. Practically all children are infected; tuberculous processes may develop at any time; good health, hygienic living, and sanitary surroundings are useful aids but they do not guarantee any child against the development of tuberculous processes; how shall we protect the children by detecting the earliest tuberculous beginnings? Detection is the problem, how are we to solve it?

Suppose we make it a rule that no child shall be permitted to enter a new school year or new classes without a certificate stating that there is no danger from tuberculosis. If we have medical inspectors of schools this could be part of their duties. In order to be effective and not a mere pretense, these examinations should be made by an expert and Von Pirquet, and X-ray be made, because a physical examination cannot avail unless there are sufficient structural alterations to affect the physical signs. In at least forty per cent of cases, the beginnings of tuberculosis do not affect the physical signs because they cannot. When the threads of infiltration run along the bronchial tubes and the blood and lymph vessels there are no changes in the breath sounds because there is nothing affecting the lining of the bronchi; there are no changes in percussion because the lung is well supplied with air and it is only until later when the smaller bronchi become suppressed and atelectasis develops that there is any reason for changes in physical signs. A physical examination of a lung may be absolutely inadequate to reveal infiltrations of dangerous extent and therefore should never be relied upon without the confirmatory evi-

dence of the X-ray and Von Pirquet.

This radical method of preventing tuberculosis will never go into effect until the medical profession as a whole is convinced of its necessity and justification. Our Public Health Service should be especially taught the latest truths concerning tuberculosis in order that they may efficiently co-operate in the instruction of the people and the profession. Where will these officers obtain this instruction? Where is the information so necessary for the efficient suppression of this disease accessible to the busy health officer? Where is it taught to students or post graduates or internes? Nowhere. The results of thousands of enthusiastic laboratory workers are hidden away in isolated reports and their significance has never been correlated or placed at the disposal of the profession. There is a vast quarry of information awaiting its proper co-ordination and publication in order to reveal the truths so necessary for the comprehension of tuberculosis. If you should say to the average health officer or doctor that tuberculosis is a disease of childhood inevitably acquired and due far more to danger from within than without; if you should say that tuberculosis is perpetuated and extended on into adult life almost exclusively through apparently perfectly well children; that maintenance of resistance is helpful but not an absolute guarantee against tuberculosis; that the greatest fault in our present methods is waiting for a case to become manifest and that this waiting is responsible for delayed diagnoses and death; that the time to overcome tuberculosis is not when milk and eggs are needed but long before; what would he say? He would say, this is all very fine but I do not believe it. Where are your proofs? And where are they? Hidden away in sources inaccessible to the average reader and lost because of their inaccessibility. Our friends that we are trying to convince of the truth of these facts will turn coldly away and go on insisting that the proper way to prevent tuberculosis is to wait until it declares itself. Before the loss can be saved, we must be able to convince. Before we can convince we must have all this mass of information worked up in such a shape that it can be used by the busy man. We need far more than mere money, more knowledge and more comprehension of what this disease is that is costing the United States 1,200,000 lives and over \$900,000,000 a year or enough to build each year three Panama Canals. We need a tuberculosis commission to properly present and enforce the truths already acquired. We need a thorough study of the whole phenomena of acid fast bacilli

and of the universal infection of the animal world by them. We need to know why cows and hogs and poultry are so universally threatened by tubercle bacilli. They live under ideal conditions; they do not drink alcohol or lead immoral lives; there is no overwork or underfeeding; no struggle for existence; no nervous strain; no crowded tenements. Where does the infection come from and why does tuberculosis develop? It is easy enough to say: "Every case from a case," but this is merely the expression of fundamental ignorance; of fatuous self-satisfaction content with its knowledge and not knowing enough to know that there is any need of placing the whole question upon a higher plane of comprehension. Before we can go any farther in the prevention of tuberculosis we must feel the necessity for more knowledge and ask that a commission be appointed to inform us. This commission must be adequately equipped with an outfit equaling the demands of the situation and suitably housed; in other words, we need a Tuberculosis Institute for the investigation of the problems underlying the prevention of the disease. We have in our own State of North Carolina, 17,000 cases of tuberculosis. What have we to expect of the future? We know that the death rate has been reduced fifty per cent because of better methods of treatment but we also know that the number of cases has not been reduced one particle and that on the contrary the percentage of cases is increasing, especially among school children. Before the age of fifteen, the per cent of cases is higher than ever. A little thought will impress everyone with the tremendous burden we have threatening us if we are to assume the responsibility for cases of tuberculosis not able to support themselves. The utter impossibility of ever being able to keep up with the ever increasing demands will stagger the tax payer confronted with this alternative. This way out leads to financial horrors or neglected cases. It would be far cheaper to thoroughly attack the foe right where it starts among the children in our public schools and not lose all the expense of education and supporting the tax payer and wage earner only to lose it all just when the return should be made. Let us adopt the old Greek motto and admit that we know nothing adequate concerning our greatest foe, and, deploring this ignorance and the helplessness that it entails, ask the Medical Association of the State of North Carolina to draw up a statement of this fact and base upon this statement a set of resolutions to be sent to the American Medical Association asking for the appoint-

ment of a committee to bring this matter before the Federal Government with the aim that a tuberculosis institute may be established for the furtherance of knowledge, and the searching out the fundamental truths requisite for the proper prevention of the disease.

The Place of the County Physician in Health Work.*

By L. M. Glenn, M. D., Gastonia, N. C.

When I was asked by our ever alert Secretary to write a paper on the above mentioned subject I felt almost like I had been placed in a row-boat without oars. Our progress along health lines has been so marvelously rapid during the last decade that we ordinary county physicians can scarcely keep up with the march. Several counties in our good State have employed *whole time health officers* and have made such rapid strides that the health laws of the State have been revised and re-revised to keep up with the progressive ideas until the county physician who can keep up with the laws is a rarity, his knowledge thereof having been entirely disconcerted and he again being put to sea.

About all that he is sure of since his powers have been curtailed is that he is the all important official, who when it comes to attending to paupers and prisoners, can say with William Cowper in his "The Solitude of Alexander Selkirk:—"

I am Monarch of all I Survey,

My right there is none to dispute;

From the Center all around to the sea,

I am Lord of the fowl and the brute.

EIGHT POINT.....

The fruits of his past labors are now to be gathered by those who did not plant. He has been, but is not, in the eyes of many of those who gloriously march in the vanguard of our health forces and with the fly on the chariot wheel exclaim, "What a dust I do raise."

These same progressives would place him high and dry on some secluded sand-dune and artfully and triumphantly label him in his proper place among the hulks and fossils of a barren past, so great and so satisfactory has been their splendid evolution from the insignificant position occupied by them in the not-very-long-ago-past; in the days when the lamented Wood with nothing to work with, with no sentiment to help, nor colleague even to encourage builded wiser than he knew; in the days of the recently retired Lewis who crowned his almost lonely administration by discovering

*Read before recent meeting of North Carolina Medical Society.

and placing at the head of our health work the best secretary in the whole United States—Dr. W. S. Rankin.

These were the men who laid the very foundation for the splendid aggressive officials of today to build on.

It fills us with zealous pride to see strong brilliant young men like Rankin, Shore and Ferrall together with their able corps of assistants respectively, giving to their beloved State of North Carolina the very best service within them for the nominal remuneration they receive.

It warns us to active effort when we observe Stiles and his willingness to forego the eminent success which could in no way escape him in private practice that he might render a broad and humanitarian service not only to the land which gave him birth but to mankind in general.

Indeed, are we filled with admiration when we see such wonderful manifestations of self-sacrifice and devotion to health work as is shown when such men as McBrayer voluntarily give up a splendid and lucrative practice in one of the very best cities of our whole South land, built up by years of relentless effort both mental and physical; sever the strong ties of friendship which have more or less unconsciously bound strong minds and strong hearts together in an affection that is never realized until broken, and dedicate his future life to the noble and glorious work of tearing the very tentacles of the great white plague from the lives of our boys and girls, our young men and our young women, and offering back to the State, for its service, a splendid citizenship.

When we observe the rapidly growing sentiment for a Department of Health with its head a member of the President's official family and feel sure that this great achievement is a thing of the near future we almost lose sight of the insignificant county physician far in the rear.

When we contemplate what has been done, how it has been done, and by whom it has been done; when we take stock as it were of the condition of health affairs today and again look around at the generals who are so brilliantly directing our health forces we must likewise look for the private in the ranks in order to arrive at a proper estimate of our conquering forces. This my friends, brings us to the discussion of the place of the county physician in health work. Instead of having to deal with a subject void of value, without any position to take without any theme to stress, without any ground to occupy or point to make bold to say that we have been made sponsor for that all-important class of physicians who in a very large

measure constitute the very basic element of our whole health structure. In the past as well as at present they may well be called the Paul and the Apollos of our health work since it was they, and is they now, who did and are still doing the planting and the watering that our none the less appreciated advanced health officers might gather the increase. May it not be forgotten that the harvesters of today have not been the planters, the sowers, or the tillers of the past. These advanced health men have come on the scene of health service after many seasons of modest labor by the ordinary county physician.

Regardless of his poor crops in the field of health work he has never yielded to discouragements and disappointments but steadily and persistently plodded on till he has realized that his labors are at last fruitful.

To be sure we do not lay claim to all that is being done but we do claim that in a very large measure the humble county physician of the past has engendered a certain amount of that strong sentiment that has brought about our present advanced position in health matters. The place of the county physician in health work is a most strategic position. He has a far greater opportunity for good constructive work, if he be the right kind of a man, than almost any other official; while on the other hand he has a great opportunity to do destructive work if he be a man of sinister motives.

Our county physicians well know of the many times in their work that they are in a place to wonderfully aid our health forces and also are aware of the fact that often they are in a peculiarly tenable position for the man who wishes to nullify the best efforts of able and energetic health officers.

Slowly perhaps but most surely can he crystalize sentiment for substantial health work if he be the right kind of man.

Just so surely can he retard health work if he so elects.

He can be a most valued constructor or a much deplored destroyer. His position is well nigh invulnerable and his activities either for good or for evil are especially fruitful.

He should be a man of many good qualities, possessed of an unlimited supply of tact, prudence and energy, and above all things a teacher even more than a doctor. He should be able to eradicate ignorance and prejudice and impart enlightenment and a spirit of liberality and consideration.

Because he is not a whole time health officer by no means limits his open fields of usefulness nor does it prescribe limited

duties for him. He has the broad liberty and open opportunity to do any of the many things that are essential to the success of the best of our whole time men.

He has the same opportunities that they have except that he is not so well paid and may perchance not be able to give his work the amount of time necessary for accomplishing results.

Only a very few years ago it would have been an absurdity to have advocated a whole time health officer in any county in the state, but today we are very proud indeed that we have perhaps more whole time health men than any state in the whole union. You might say that our health work never occupied the respectful position that it now occupies until we had some whole time men, but you must admit that the whole time men are but products of evolution in which the county physician must be given some share.

In health work as in other things it takes money to do things. In most of our counties we will find men of excellent business qualifications on the boards of county commissioners. These men are incessantly harassed with all kinds of propositions which are no more than so many tools trying to get under the lid of the county of sacred funds must of necessity keep the lid well nailed down. In order to get a peep under the lid for the advancement of public health, the county physician must be plausible, tactful, resourceful, determined, respectable, and respectful and if these qualities properly exercised fail to get funds I would almost condone calling in a high grade yeggman. Above all the county physician must not only be possessed of these characteristics but he must display energy and show results.

Decidedly one of the greatest functions of the county physician is to faithfully discharge his duties to his fellow-health workers, and most especially, to the secretary of the state board of health. He should keep this official fully advised at all times as to the condition of health matters in his county. He should be prompt and accurate in all his reports to his superior officer and call on him freely for advice and information to the end that their united efforts may, as they surely will be, crowned with success.

Let us then encourage and assist the county physician in his trials and tribulations. He is an indispensable man and as much as we would like to supplant him with whole time men it remains a task for the distant future. Many counties from force of circumstances must keep him indefinitely.

To some of you he may appear an insignificant element in our health work, but I must contend that he is just as indispensable as he is insignificant.

The increase in the number of whole time men will in a large measure depend upon the development of the county physician. I am sure you are cognizant of the fact that most of our present whole time men were at one time members of that humble class of men modernly dubbed "ordinary county doctor".

The point has been stressed that the county physician is not entitled to, and has no right to be honored with the distinctive title "Superintendent of Health", but so far as I am informed, I do not think I am misrepresenting him when I say for him that he is not nor has he ever clamored for such a title. That label he has never considered essential to his success nor has he ever envied the man who does.

Their right to do whatever health work they see fit to do has never been abridged.

I must contend then that the county physician has a place in health work. He is a strong spoke in the wheel and cannot at present be dispensed with. He has been a potent factor in developing and securing what we have; he is a potent factor in maintaining what we have; he is a potent factor in evolving from his sphere to that of the whole time health officer, and, except as he evolves may his tribe never decrease.

Human Ovarian Autografts.--Rouville

(Arch. mens. d'obst. et de gyn.) gives the results of his observation of nine patients in whom he did autogenous grafting of ovaries. He gives careful histories and sums up the advantages and disadvantages in each case. Unless the graft has been made into the abdominal wall no direct exploration of it can be made, and we can judge of its effects only by the changes in the symptoms of the patient. An exact evidence of the effect of the graft would be the occurrence of pregnancy following the graft in a woman from whom all ovarian tissue had been removed. This has been reported, but the author thinks doubt can be thrown on such cases on account of possible ovarian remains after operation. The removal of the ovary destroys the equilibrium which normally exists among the glands of internal secretion, thyroid, ovaries, and suprarenals. From this result the symptoms of the menopause. The continuance of menstruation, or its appearance where the flow had ceased, would indicate the normal condition of the graft. Among those grafted are cases in which there was observed menstruation that was abnormal,

irregular, alternately profuse and scanty, indicating a true ataxia of the internal secretion of the graft. Menopause symptoms are infinitely variable in intensity: some have abundant metrorrhagias undoubtedly caused by the graft. A microscopic examination of the graft is of value. In all the author's cases the impression of the results of the grafting was unfavorable. There was but one favorable result in his nine cases, and that lasted but a short time. The grafts were not capable of permanent function: the patients seemed simply to have a slow deprivation of ovarian functions. Still we should continue these experiments with a view to maintaining as far as possible the normal function of the female economy.

Isolation and Quarantine Periods in Common Infectious Diseases.—Ker (Edin. Med. Jour.) regards scarlatinal desquamation merely as an outward and visible sign that a person has had scarlet fever. The doctor approves of the rigid isolation of such patients when they are found in a tenement of class-room in which the disease has broken out. Their subsequens detention must depend on the facts of the case. He suggests that even an alteration of the accepted minimum period of isolation from six weeks to five would be a great step in advance. As regards the period of quarantine to be imposed on contacts, in hospital outbreaks he is content with five days. Perhaps seven days might be ample for schools. A diphtheria patient must be kept until the necessary negative cultures have been obtained. Very often the illness lasts much longer than the infectivity. As regards the quarantine period the writer sees no use in continuing to quarantine perfectly well contacts who have given two successive negative cultures, which may well be obtained within three or four days. As regards children at any rate, cultures should be taken from every contact and the proved carriers isolated. There is little use in quarantining contacts for a fixed period, as, unless cultures are taken, it affords no security at all. The usual isolation period of measles is a fortnight from the period of eruption. The quarantine period for measles in hospital outbreaks is fifteen days. For rubella, Goodall's recommendation of isolation for seven days from appearance of rash seems ample. The long incubation period of this disease would appear to justify some attempt to employ the first two-thirds of it at least at school. Contacts could safely attend school for eight or nine days after exposure, and thereafter should be excluded until the twenty-first day is

past. While the long periods of time in hospital spent by whooping-cough patients are of the very greatest advantage to the children themselves, in favorable circumstances and with otherwise healthy children, isolation until the whooping ceases is quite unnecessary. Of the great infectivity of whooping-cough in its prodromal catarrhal stage there is no doubt. Probably there is but little infectivity after the patient begins to whoop. Rigid isolation in a private house, is probably unnecessary after the paroxysmal stage has lasted for a week or ten days. In chicken pox the author believes that a patient is infectious until the last crust has separated, but when any given crust has become naturally detached, the secondary scab forming in its place is not necessarily dangerous. As regards quarantine for this disease, the writer often allows contacts to be mixed with other children up to the eleventh day, when they are isolated until the twenty-second. In mumps he has never seen harm result from allowing patients out of isolation when a full week has elapsed after the disappearance of swelling. Exclusion of contacts from the thirteenth to the twenty-sixth day from the date of the first and last exposure respectively would be a quite safe rule for schools to adopt.

Cod Liver Oil in Hot Weather.

It is not necessary to stop the employment of cod liver oil during the heated term. One need but employ Cord. Ext. 01. Morrhuæ Comp. (Hagee), from which the nutritive advantages attaching the crude oil may be obtained.

In Cord. Ext. 01. Morrhuæ Comp. (Hagee) the physician has at his command an admirable tissue food, and one which he may depend upon at all seasons of the year.

July Century News Notes

Miss Winifred Holt, daughter of the publisher Henry Holt, is the heroine of "People of the Night," a paper that will appear in the July Century, telling about the splendid work that is being done by the New York Institution for the Blind, of which Miss Holt is the founder and guiding spirit.

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See page xiv this issue.

Charlotte Medical Journal

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

THE MEDICAL SOCIETY OF NORTH CAROLINA.

The North Carolina Medical Society met in Raleigh on June 16th. The program which was published in the last issue of the Journal was practically carried out. The addresses of welcome were appropriate and well received and the entertainments given the visiting doctors were appreciated by everyone. The chairman of the committee of arrangements, Dr. Albert Anderson, of Raleigh, certainly did his work well. The entertainment given the visitors on the beautiful lawn at the state hospital was one of the most enjoyable features.

Dr. J. M. Parrott, the Retiring President.

The annual session of the North Carolina Medical Society recently held in Raleigh was the record breaker in point of members present, more than four hundred and thirty-six registering during the first two days, and a number of others came the last day making the total registration for the session in excess of four hundred and fifty, about fifty more than ever previously attended the society in any one year, and a number largely in excess of the entire membership in good standing at the time of "reorganization" some 11 years since. In every respect the meeting was a successful one, and in great degree the full measure of attained success is due to the splendid gentleman who guided the destinies of the profession of North Carolina during the past year and presided over the Raleigh sessions of the Society, Dr. James M. Parrott, of Kinston, N. C. During his official term he attended a larger number of county and district society meetings than any of his predecessors, and for some months past has labored indefatigably for the success of the Raleigh meeting. Of extremely quiet, gentlemanly, demeanor, attentive to every demand made on the chair, wisely considerate and fair in his official rulings, Dr. Parrott wielded the President's gavel with rare tact, and retired from its important responsibilities with the kindly esteem of his colleagues.

**ITS NEW PRESIDENT, DR.
LEWIS B. McBRAYER.**

Rarely have the honours of North Carolina's distinguished medical profession fal-

len with greater rapidity than on the broad and eminently worthy shoulders of the gentleman recently designated by the Medical Society of North Carolina as President for the ensuing year, Dr. Lewis Burgin McBrayer, Superintendent of the State Sanitarium for Tuberculosis at Montrose, N. C. Making a good grade before the state Board of Medical Examiners not so many years in the past, a year or two later he made an impressive Response to the Addresses of Welcome, later as Orator he charmed the audience of both profession and people and only a little later was elected a member of the state examining board where he has, as has been his wont in every position where placed, distinctly made a success. Devoted to his profession, an earnest and enthusiastic believer in its best ideals, Dr. McBrayer has always sought the best in medicine for himself and for his friends. Both a man of high ideals and great capacity in action, he has shown himself in every position where the kindly favor the profession have placed him, a master builder and an executor of great capacity. While an active practitioner at Asheville, his services were laid claim on by his home city, and becoming Asheville's municipal health officer he placed that fair mountain metropolis in the front rank of sanitated cities, and made the Asheville health department, and its work, the subject of favorable and enviable comment far and wide. Only a few months ago when the State Board of Health were carefully searching near and far for a man with the rare combination of abilities necessary in the person of the Superintendent of the State Sanitarium if it be wrought to the ideal desired, their eyes were directed to Asheville and to Dr. McBrayer, and after solicitation, Dr. McBrayer accepted the position and went to Montrose. Three months pass quickly, but in that time he has stamped his strong personality upon the management of that institution and gives promise of realizing the ideals of the directorate in control.

At the recent annual session of the State Society he closed his term as a member of the state board of medical examiners, and was next day elected President of the North Carolina State Medical Society for the ensuing year and inducted into official position on the last day of the session.

His accession to the presidency means a good year for organized medicine in the Old North State, a year of progress and advance along helpful lines, a year of constructive purpose and unceasing energy characterizing the occupancy of the chair. As president Dr. McBrayer will easily more than live up to his established reputation

of attainment, and the banner of Aesculapius in Carolina will float aloft with honor to the leader and the profession, as well with benefit to the public who after all are the chief beneficiaries of higher medical standards and professional accomplishment.

THE NEW NORTH CAROLINA STATE BOARD OF MEDICAL EXAMINERS

At the sixty-first annual meeting of the Medical Society of North Carolina held in Raleigh, N. C., June 16, 17 and 18, 1914, the terms of the seven members of the State Board of Medical Examiners expired and their successors were elected by the Society for a term of six years each.

The board is one of the oldest in existence in America having been organized in 1859, ten years after the organization of the present state medical society. During the fifty-five years of its existence 74 Carolina physicians have enjoyed the honors and the responsibilities of membership on the board, and to date no one has ever sought, or received an election, to a second term, the unwritten law of the state medical society, which has always legally discharged the duty of electing from its membership the State's examining board for physicians, being that no one may be reelected.

From 1859 to 1890 the entire board was elected at a given date to serve terms of six years each, thus terminating the entire board membership on the same date and transferring the important responsibilities of the board work to the succeeding board composed of new members wholly. In 1890 a change was made and in the electing of the board that year it was decreed by the state society prior to the election that the terms of the members should by lot, be so arranged, as to terminate the membership off one third of the board alternate years. In this way it was thought an advantage would be secured to the board work after a few years had passed and the society experiencing the disturbing influences of too frequent elections for members of the state board of medical examiners, it was deemed wise to return to the former method of electing the entire board at one time, and the society then for a few years, elected for gradually decreasing terms, until in 1902 the terms of office of the entire board expired, and a full board was elected at Wrightsville Beach in 1902 for the full legal term of six years each.

Again at Winston-Salem in 1908 a full board was elected, and at Raleigh in 1914 another complete board. While occasionally the suggestion has been made that it would be well to recur to the plan in vogue

between 1890 and 1902, and always have some remaining members on the board, it is thought by the more observant members of the society, and especially those who have had experience as members, of the board, that the continuation of the plan as provided by the law is wisest and to be continued. Apparently on first view the suggestion would seem a wise one, but when it is recalled that a new board is always filled with enthusiastic concern to do its full duty and make a creditable record for itself as compared with previous boards, it is manifest that there will be no lowering of medical educational standards under the present plan. Again it is a fact that the members of each successive board in a short time develop a strong friendship for their fellows, and the pleasing spectacle is presented of brothers dwelling and laboring together in the peaceful harmony of earnest purpose. The friendships engendered among the members of a board, each serving the full six years besides the same members, it has been observed are most lasting, and it is a matter of common notice that the strongest personal friendships developed in the state medical society are those the outgrowth of service on the board.

The board of examiners retiring at the recent fifty-first session of the board was one of great capability, and their work was well and efficiently done. The difficult and delicate matter of reciprocity was worked out by this board, and in a way alike creditable to the board, the and to the state laws as well, as with justice to the physicians desiring reciprocal license. The work of the examining board has been an evolution, each succeeding board finding new problems presented for solution, and it may truthfully be said the medical society has never given the state of North Carolina an indifferent board of examiners or one whose members did not represent the best in the profession and stand loyally for high standards of attainment. The members of the retiring board vacate their places, handing back to the society an unsullied trust and the thanks of both profession and people are due to its members, the following well known gentlemen:

Drs. L. B. McBrayer, Asheville; John Bynum, Winston-Salem; John C. Rodman, Washington; Benj. K. Hays, Oxford; Wm. W. McKenzie, Salisbury; Henry H. Dodson, Greensboro; and J. L. Nicholson, Richlands. Their labors have been arduous and their honors have been worthy won.

The newly elected North Carolina State Board of Medical Examiners is composed of the following:

Dr. Jacob F. Highsmith, President, Fay-

etteville, N. C., age 46, graduated Jefferson Med. Coll. 1889. Dr. Highsmith founded and now successfully conducts the Highsmith Hospital at Fayetteville, N. C., and is justly regarded as one of the state's most reputable surgeons.

Dr. Hubert A. Royster, Secretary, Raleigh, N. C., age 43, grad. Univ. Penn. 1894 and made the same year the remarkable record before the N. C. Examining Board of 98 and 13-11. Dr. Royster has enjoyed a number of years experience as a teacher in the Univ. of N. C., limits his professional work to Surgery, and ranks as both a leading operator and writer as well on surgical topics.

Dr. Isaac Montrose Taylor, Morganton, N. C., aged 57, grad. Coll. P. & S. of New York, 1882. Dr. Taylor was for many years associate physician of the state hospital for insane at Morganton, N. C., later he established his handsome and commodious private institution, "Broad Oaks" for the care and treatment of nervous diseases in which line of professional endeavor he has attained celebrity.

Dr. Martin L. Stevens, Asheville, N. C., aged 50, grad. Baltimore Med. Coll. 1891. Dr. Stevens has always been a successful general practitioner of medicine, giving of recent years more especial consideration to tubercular affections. He ranks as a careful diagnostician and able practitioner.

Dr. John G. Blount, Washington, N. C., aged 43, grad. Bellevue, N. Y., 1892. Dr. Blount has been and continues, a skilled practitioner of general medicine, respected and honored in a community where his ancestry have for more than 200 years, generation after generation, enjoyed the privilege of being leaders in the professions and in business circles.

Dr. Chas. T. Harper, Wilmington, N. C., aged 42, grad. Univ. of Med. 1894. Dr. Harper has been a general practitioner for a number of years, but has shown a decided inclination for surgical work and conducts the Harper Hospital with success in Wilmington, N. C.

Dr. John Quincy Myers, Charlotte, N. C., aged 37 (the junior member in years), grad. N. C. Medical College 1904 is a successful general practitioner at Charlotte, N. C., and a hard worker in the lines of professional endeavor.

The new Board organized by electing Dr. Highsmith President and Dr. Royster, Secretary-Treasurer. The average age of the board is 45 and 3-7 years, while their years in practice average 21 and 5-7. In the full prime of successful and vigorous professional careers, they will bring to their six years' examining board labors great capacity for upholding the best traditions of the

board and the profession may rest assured their responsibilities will be worthily discharged.

THE NEW YORK ANTI-DISPENSING LAW.

New York has passed a law that forbids physicians dispensing medicines. The druggists have long been pushing for the enactment of such laws, and their success in the Empire State will undoubtedly stimulate them to increased exertions in the endeavor to have similar ordinances placed on the statute books of other states. Each such success affords the more apparent justification for their demands.

Originally brought forward as an excuse for counter-prescribing, and to bluff the physicians out of their demand that this abuse should cease, the druggists have found it possible to convert their silly claim into a reality, and to induce some legislators to accept it as plausible. Their success is due entirely to organization, and work. They have sent in a quite general plea for their bills, and brought strong influences to their aid. The manufacturing chemists and the wholesale drug trade are dependent upon and afraid of the retail-druggist. Together they present an imposing array of influential elements.

Where is the organization with which we should oppose this preposterous demand? That we have an organization, and that it has possessed itself of enormous power, many of us are unpleasantly aware. The medical profession is now organized. However, up to the present time the activities of this organization have been almost exclusively directed to our internal affairs and not to defense against external foes. It has been made a crime to invest one's funds in institutions for medical education, a crime punishable by confiscation as well as obloquy. It has been made impossible for any practitioner, however respectable, to change his location from one state to another, without undergoing an utterly impossible examination, in a multitude of matters that have developed since he studied medicine, and for which he has absolutely no use in his work. His dearest ones may be perishing of disease, for which a residence in another state might be a cure; but he is unable to take them there, because the only way he can support them is by his profession, and he is forbidden to practise it there.

Meanwhile the druggists have formulated their demands and are actively pushing toward their accomplishment, and as we see, with marked success. They ask for legal recognition of their right to practise medicine, they to be the sole judges of the ex-

tent to which this right is to be pushed. They ask the title of Doctor of Pharmacy; well knowing that few of the people are likely to distinguish between a doctor who sells and prescribes drugs, and one who merely prescribes but does not sell them. They ask that the doctor be prohibited from handling and dispensing drugs; and in fact they urge that he be restricted to the studies of pathology and diagnosis, leaving the actual treatment to be divided between the druggist and the trained nurse.

Doctor, are you ready to give up the use of drugs? Or are you willing to furnish the patient with a prescription for every dose you give out, and keep a copy to be reported monthly to the druggists, that they may judge of the necessity of your dosage? Are you so in the habit of murdering your trusting patients that when you treat one with medicines furnished by yourself, and that patient dies, the Coroner must be called to determine how far you were responsible for the death?

If not, then get busy; for these are a few of the things the associated druggists are asked legislators to enact.

A little more: Are you aware that the druggists have formed a syndicate, with the published purpose of stealing your valuable prescriptions, having them put up wholesale and sold by all members of the associated druggists without any recompense to you? Every time you send a prescription to a druggist who owns stock in this syndicate, he scans the formula, notes the effect on the patient, and if he deems it of value he sends it in to the headquarters. Here it is tried out, and if of value it is made up and appears on the counters of every member.

Do you ever see the advertisements of the wholesalers in the medical journals? No more; it is not worth their while to advertise to doctors; but turn to the drug journals and see how many of your former friends plead for the trade of the little tin god, the Retail Druggist.

Write to the wholesaler for something you want, and want at first hand; and you are referred to the retail druggist, or else he gets a rake-off from the firm direct.

There is one ally on whom you may rely—the independent medical press. It looks after your interests; it must, in self protection. Support it. Follow the plans for organized self-protection it presents. See your own representatives, and see that they comprehend the extinction of the medical profession that must ensue if these plans of the druggists are carried into execution.

THE FAMILY DOCTOR.

The crying need in these times, is the all-round, general practitioner; as in these days of so many specialists, and such a vast number who practice surgery exclusively, the good old-time family doctor is a "rara avis,"

The good old family doctor! What a place he held in the confidence, respect, and adoration of the family. He was consulted on almost everything, physical, moral, social, and what not! He had a power, and influence in the management of the sick, as his patients believed implicitly in his solid, and practical judgment; that his brain was the foundation of unerring wisdom; that he knew the temperament, constitutions, and idiosyncrasies of every member of a household; and knowing these, he was successful in treating disease. They believed he possessed sovereign remedies for all the ills of the flesh, and he was appealed to on all occasions. Experience and skill are indispensable; and they were accomplishments of the old-time family doctor, even if he did have only the crude medicines as his weapons against diseases.

They were so firmly intrenched in the confidence and veneration of their families, that they rarely were harassed by the meddlesome officiousness of outsiders; and consultations were never had except at the instance of the doctor himself. As a rule, they knew what to do in an emergency; and like the country doctor, they were thrown on their own resources. With but meagre text book knowledge, they cured the sick all the same. They got faithful and intelligent co-operation, and charitable allowance was made for any shortenings and failures.

The family doctor didn't rush, in, and rush out, but tarried till he ascertained the true condition of the patient.

Now the question is, have we much better success to-day than had those physicians of long agents? True, we have now better against, concentrations, palatable elixirs, triturates, etc; but results are not much better than they were fifty years ago.

Along some lines, we can do better than did our ancestors; but with the remedies of today, if used in ailments of long ago, would probably do no better than the remedies they used. Old-timers were herico men, and their practice was heroic. They didn't let up as long as there was life, and stayed at the bedside till death closed the scene.

"A REMARKABLE PUBLIC HEALTH MEETING IN WILMINGTON, N. C."

Off the various southern cities there has been none that have taken a higher stand in regard to matters pertaining to public health than Wilmington, N. C., and its health department may today viewed as in many respects a model and distinctly worthy of emulation. A recent official communication from Dr. Chas. W. Stiles of the U. S. Public Health Service, who has been stationed at the port of Wilmington for the past four years affords interesting information relative to the public interest that has been created in that city on health matters:

Wilmington, N. C., June 1st, 1914.

The Surgeon-General, U. S. Public Health Service, Washington, D. C.

Sir:—This evening there was held in Wilmington, N. C., one of the most remarkable public health meetings I have ever attended. It was a citizens mass meeting, called by prominent citizens and attended by 500 to 600 men, many of them among the most prominent leaders in the city and county.

It was called to consider the section of the City Council in Cutting down, by about \$5,000.00, the budget as presented by the County Board of Health and as approved by the County Commissioners. This cut in the budget would result in a reduction of the two full-time health officers to one, a reduction in the number of the sanitary police, and an elimination of the sanitary engineer. For several years past there has been here a considerable amount of lack of harmony in reference to the health work.

The health office has had an uphill fight against various element, but has increased in efficiency and activities, notwithstanding the opposition.

Two years ago, two public protest meetings were held to voice public sentiment against the action of the health office. Tonight, the protest was against limiting the work and the expension of the health office.

In the City Council, the Mayor and one Councilman were in favor of the budget, while four Councilmen expressed themselves against portions of it. A Committee of citizens appeared before the Council and requested the opposing Councilmen to change their attitude. One Councilman was won over, but three stood out against certain details in the budget. This action resulted in the meeting this evening. The Council had been invited to attend, but only the Mayor and one Councilman appeared.

The meeting unanimously endorsed the budget as originally proposed, and provid-

ed for the appointment of a committee of twenty-five citizens to appear before the Council to urge reconsideration of its action.

The meeting was the occasion of a calm discussion of the value of and necessity for health work. It was a meeting, not of a political party, but of heads of families why calmly but firmly demanded that no backward step be taken in respect to the protection of the women and children against unnecessary sickness. It was a practical answer to the question whether the present day campaign for better sanitary conditions is making progress. No one could attend the meeting without feeling the serious and encouraging significance involved. It meant that the leading citizens of the City of Wilmington and the County of New Hanover are determined that no reasonable effort be omitted to make this locality as healthful as modern sanitary science can make it; it meant that when public health is concerned, the enlightened citizen realizes the difference between cheapness and economy.

Were it possible to reproduce this meeting in moving picture and phonograph, the film and the record would be an educative factor and influence of very far-reaching importance throughout the entire country.

A mere recital of the facts conveys but a faint idea of the significance of this unusual spectacle. Fathers of families plead seriously, earnestly, calmly, eloquently, that no backward step be taken, but that the lives and health of the women and children be surrounded by every safeguard within reason.

Politics, financial considerations, even the well-earned reputation of the city and county were kept in the background. The key-note of the entire meeting was that health work must be kept in the line of progress and that the lives of women and children were to be held above all other considerations.

Wilmington and New Hanover have tonight set to the entire country an intelligent and an inspiring example.

Respectfully,

C. W. STILES,

Professor of Zoology.

Editorial News Items.

The Randolph County Medical Society held an interesting meeting at Ramseur on June 2nd. This was by far the best meeting for about ten years. Three members joined the society and quite a number of interesting papers were read, among the best was one by Dr. C. C. Hubbard, of Farmer,

and one by Dr. C. A. Hayworth, of Coleridge. The next meeting will be held at Farmer.

Dr. Samuel H. Henley, of Asheboro, N. C., passed quietly away on May 27th at 3 o'clock in the morning. He had been quite ill for about five weeks but had been almost an invalid for the past year. His home burned down about two months ago and since that time he has been making his home with his daughter, Mrs. L. D. Bulla.

Dr. Henley was born in Back Creek township, 1836, and was at the time of his death 78 years of age. He was educated at New Garden Boarding school, which afterwards emerged into Guilford College but received his medical training at the Jefferson Medical College of Philadelphia. He began the practice of medicine about the close of the war in Concord township and up to the time of his death had practiced medicine in Randolph county more than fifty years. During his life he held many offices of honor and trust within the county and was for years a county Commissioner, also superintendent of the health board of the county, a founder of the Randolph Medical Society and served as its president for years, a member of the State Medical Society, also of A. M. A. He gave faithful unselfish service to his patients and they in turn rewarded him with responsive devotion and loyalty. He will be missed by a wide circle of friends.

The North Carolina Medical, Pharmaceutical, and Dental Association closed its twenty-fifth annual session in Charlotte on June 18th. This meeting marked the largest attendance in the history of the Association, over fifty per cent of the members being present. All of the papers presented were quite interesting.

The following officers were elected:

President—Dr. J. W. Jones, of Winston-Salem; Dr. A. M. Pierce, of Greensboro, first vice president; Dr. J. H. Patterson, second vice-president; Dr. A. A. Wyche of Charlotte, secretary and treasurer; Dr. A. S. Burton, of New Bern, assistant secretary.

Executive Committee—Dr. F. S. Hargrave, Dr. G. A. Gerran, Dr. H. W. Fisher, Dr. J. O. Plummer, and Dr. A. M. Moore.

National Representative — Dr. J. W. Walker.

In Raleigh on August 25, 26, and 27 the association will entertain the National Medical Association which is the most representative body of negroes in the entire United States.

Dr. W. C. Ashworth, of Greensboro, North Carolina, will sail for Europe on the 13th. instant for the purpose of attending the Neurological Clinics in the leading European cities.

Dr. Robert Stuart Primrose and Dr. Richard Nixon Duffy, announce that after June 1st 1914 they will be associated in the practice of General Surgery, New Bern, North Carolina.

The N. C. State Health Officers Association under the Presidency of Dr. G. M. Cooper, held its annual meeting in Raleigh, N. C., June 15, 1914, having three busy sessions during the day and evening. Gov. Craig welcomed the sanitarians. Dr. W. M. Jones, of Greensboro was elected President, Dr. D. E. Seveir, Asheville. Vice-President, and Dr. W. S. Rankin, Raleigh, re-elected Sec'y.

Dr. Robt. J. Gill, Henderson, N. C., was the winner of the Grand First Prize a high grade automobile, in the recent popularity contest promoted by the "News & Observer" of Raleigh, N. C.

At the recent session of the North Carolina State Board of Medical Examiners held in Raleigh, N. C., June 10-18, 1914 118 applicants were considered. Of these 81 were licensed and 37 rejected. 21 negroes applied and one third, or exactly seven were licensed. One Indian applied and was given "a limited license" which restricts his practice to the territory occupied by the Indian residents of Robeson County, N. C., First honors were accorded Dr. T. E. Wilkerson, Roxboro, N. C., a recent graduate of the Univ. of Pa., Drs. J. F. Belton, Mt. Airy, N. C., also a graduate of the Univ. of Pa. and Dr. P. A. Petree from the Jeff. Med. College tied for second honors of the Board.

The alumni of the University of N. C. Medical Department held a very enjoyable banquet on the evening of the first day's session of the State Medical Society during its meeting in Raleigh, N. C., Dr. C. O. Abernathy, Raleigh, N. C., did the honors with accustomed grace.

The North Carolina Medical College of Charlotte, N. C., it is stated, has perfected arrangements with the Medical College of Virginia at Richmond, and the active work of the College will be discontinued at Charlotte while the present matriculants will complete the course in Richmond.

Dr. W. L. Jackson, of Trinity, N. C., has removed to High Point, N. C., where he will continue practice.

Dr. W. S. Bainbridge, of the N. Y. Skin and Cancer Hospital was an honored guest of the High-Point-Thomasville, N. C., Academy of Medicine June 22 and operated before some thirty local physicians during the day and was entertained at dinner later.

The annual commencement of the Highland Hospital at Asheville, N. C., graduated five nurses June 28, 1914.

Dr. L. G. Roughlin of Atlanta, Ga., was indicted for involuntary manslaughter in that city June 18 in causing the death of a child under an anaesthetic while operating on the child last April. It was charged in the indictment the physician did not use due diligence and care in the use of the anaesthetic. The Fulton County (Atlanta, Ga.) Medical Society have adopted resolutions expressive of sympathetic interest and demand a speedy trial for Dr. Roughlin.

Dr. W. W. McKenzie, of Salisbury, N. C., who was taken ill while attending the session of the state board of Medical Examiners of which he is a member, in Raleigh, N. C., and carried to the Whitehead-Stokes Sanitarium has much improved and it is expected he will resume practice very soon.

North Carolina from recent developments presents, with its matchless climate and its superb people, a state peculiarly attractive to men who have won great financial success with proprietary medicines. Only last year the owner of a widely known "grip Tablet" and "chill Tonic" located in Asheville and built one of the most famous and sumptuous hotels in the world. Now the proprietor of a widely known "liniment, good for man or beast," has purchased a large tract of land on the lower Neuse and proposes to erect thereon the most superb private mansion in the world.

Gov. Locke Craig of North Carolina is not only a progressive governor, but a progressive sanitarian as well. In welcoming the N. C. State Health Officers' Association at the recent meeting in Raleigh the Gov. told his auditors that without discounting the value of good roads, churches, school houses etc., he felt now the most important thing next to be done in North Carolina was to put running water and proper sew-

age into every man's house in the state, and urged the inauguration of a move to this end.

The annual session of the Southern Railway Surgeons was held in Washington D. C., June 18, 19 and 20. A goodly attendance of the medical staff of this extensive railways system were present, and some good papers and addresses were presented. The 1915 meeting will be held at Asheville, N. C., under the presidency of Dr. H. T. Babnson, Winston-Salem, N. C., with Dr. J. U. Ray, Woodstock, Ala., Sec'y-Trea.

Dr. Merrill E. Champion has recently been added to the staff of the N. C., State Board of Health. He is a Harvard Graduate (A. B. & M. D.), and a holder also of the special Harvard Certificate of Public Health work in addition to eight years experience as health officer of Arlington, Mass. He has been assigned to work in Nash County and will take part in the "clean up work" of the State Board following the general plan now in vogue in New Hanover, Sampson and Robeson Counties where public health of the most advanced type is now being done.

Seven children bitten by a hydrophobic cat have just undergone antirabic treatment for it at the N. C. State Laboratory of Hygiene.

The N. C. State School for Feeble-minded opened at Kinston, N. C., July 1st with Dr. C. Banks McNairy, formerly of Lenoir, G. C., as Director. The institution has a faculty of nine capable teachers and an earnest effort will be made to study, classify and educate the subnormal children admitted in whatever direction appears to be best suited for the individual child. It is expected to establish in connection with the school a psychologic clinic where children below the average mentality may be carried for study and expert observation for a short time with a view to intelligently affording the very best facilities for developing whatever individual capacity may be present in addition to the segregation and protection of young girls of defective type during the year of their lives when most exposed to danger.

Dr. J. F. Highsmith, of Fayetteville, N. C., President of the N. C., State Board of Medical Examiners has sailed for Europe and expects to spend the summer months in surgical postgraduate study.

The Greatest Year in Health Work in North Carolina - Glowing Report of State Board of Health Meets Commendation of the State Medical Society.

The principal feature of Wednesday's meeting of the North Carolina State Medical Society was the conjoint session of the Medical Society with the State Board of Health. It was at this meeting that Dr. Rankin, as Secretary of the State Board of Health, gave his official report for the year.

Dr. Rankin started out by explaining that the growth of health work had made it necessary to differentiate the work of the Board into six departments or bureaus. These departments in the order of formation have been first, State Laboratory of Hygiene, second, Bureau of Hookworm Disease, third, The Bureau of Engineering and Education, fourth, Bureau of Vital Statistics, fifth, Bureau of County Health Work, and sixth, Bureau of Tuberculosis. Dr. Rankin then gave a statistical report showing the work accomplished by each bureau during the year.

The work of the State Laboratory of Hygiene is especially varied and includes a great many analyses of various kinds, such as water analyses, sputum analyses, examinations for rabies, for malaria, for hookworm, for typhoid fever and other miscellaneous examinations, together with a great many treatments for people bitten by rabid dogs and for children who have contracted diphtheria, together with the manufacture and distribution free of charge of sufficient typhoid vaccine to immunize about ten thousand people against typhoid fever within the last few months.

The work of the Hookworm Department indicates that hookworm campaigns have been held in 98 out of our 100 counties, and that preparations are already being made for holding campaigns in the other two counties. The plan of work with reference to hookworms is being changed from that of county campaigns to specialized community work directed against this disease.

The work of the Bureau of Education and Engineering consists in preparing and distributing all the literature and other educational matter of the Board, besides the engineering work in connection with the water works and sewers throughout the State.

The Vital Statistics Department has been under the direction of Dr. J. R. Gordon for the last five months. The tremendous interest shown in this work is best indicated by the fact that the total number of birth and death certificates received at this office by the Board since Dr. Gordon has taken

charge have increased for the last four months as follows: in February 4484 certificates were received, March 7131, April 8261, and May 9481. In Dr. Rankin's estimation, this record, considering the time during which the vital statistics law has been in operation, exceeds that of any other southern state with the possible exception of Kentucky.

The report of the Bureau of County Health Work indicates that there are now twelve whole time county health officers in North Carolina, being more whole time health officers in this state than any other state in the Union.

The Bureau of Tuberculosis, established by the last special session of the Legislature, is under the direction of Dr. L. B. McBrayer, and is already in a flourishing condition. For the first time in the history of the State Sanatorium, this institution has been filled to overflowing with tuberculosis patients. Many applications for admission have to be declined and a number of patients have recently reported to the Sanatorium without first having made application for admission, only to find that every available space for beds had been filled.

After submitting this report, the State Society gave a vote of thanks to the State Board of Health for the work it was doing in conserving the health of the citizens of the State.

BOOK NOTICES.

Practical Therapeutics. Including Materia Medica and Prescription Writing, with a Description of the Most Important New and Non official Remedies Passed upon by the Council on Pharmacy and Chemistry of the American Medical Association. By Daniel M. Hoyt, M. D., Formerly Instructor in Therapeutics, University of Pennsylvania; Fellow of the College of Physicians; Assistant Physician to the Philadelphia General Hospital. Second Edition, Revised and Rewritten. St. Louis, C. V. Mosby Company, 1914. Price \$5.00.

A special feature of the new edition of Practical Therapeutics is the arrangement. At a glance the reader can get the physiological action on different organs, such as the brain, spinal cord, heart, arteries, skin and intestines; the toxicology and its treatment; also the therapeutic indications and contra-indication.

It also contains a description and the use of all new and non-official drugs that have been passed upon by the Council of Pharmacy of the A. M. A.

It gives the combination and value of most proprietary remedies, and tells the dispensing physician what drugs he can use most satisfactorily to himself and his patient.

The volume has also been re-indexed which makes it a ready reference book and of especial value to the busy doctor.

Progressive Medicine, A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, *Materia Medica and Diagnosis* in the Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. June 1, 1904. Lea & Febiger, Philadelphia and New York. \$6.00 per annum.

Volume 11, 1914, of *Progressive Medicine* contains the following papers: Hernia by Dr. William B. Coley, M. D.; Surgery of the Abdomen, Exclusive of Hernia by John C. A. Gerster, M. D.; Gynecology by John G. Clark, M. D.; Diseases of the Blood, Diathetic and Metabolic Diseases Diseases of the Thyroid Gland, Spleen, Nutrition, and the Lymphatic System by Alfred Stengel, M. D.; and Ophthalmology by Edward Jackson, M. D.

All of these papers are most excellent and the many illustrations of course add value to them. It is a real pleasure to look through a volume of this sort.

Blood Pressure in Medicine and Surgery. A Guide for Students and Practitioners. By Edward H. Goodman, M. D., Associate in Medicine in the University of Pennsylvania. 12mo, 226 pages, illustrated. Cloth, \$1.50, net Lea & Febiger, Publishers, Philadelphia and New York, 1914.

No physician is properly equipped today unless he understands blood pressure and carries with him an instrument. It is quite as important as the thermometer and stethoscope. The subject has been thoroughly investigated in all its bearings by many of the foremost physiologists and clinicians.

A brief, clear and authoritative book has been needed to place this definitive body of knowledge readily at command of the practitioner of medicine and surgery. Dr. Goodman has devoted years of study to the subject, and is qualified to present it in every particular. He covers the physics and physiology sufficiently to convey an understanding of the principles, and then devotes successive chapters to Hypertension and Hypotension; Blood Pressure in Cardiovascular, Renal, Infectious and

Nervous Diseases. Chapters are also given on Blood Pressure in Obstetrics and in Surgery. Then the author deals with conditions in the Gastro-intestinal tract and the Internal Secretary Glands and in Ophthalmology. He closes with chapters on the Effect of Drugs and other Therapeutic Measures on Blood Pressure and on the treatment of Hypertension and Hypotension. His style is exceedingly simple, clear and direct, and he introduces many typical and instructive diagrams. As an authoritative compendium of the subject this handy volume accomplishes its purpose "to make fully available the assistance which the study of blood pressure affords in the diagnosis, prognosis and treatment of disease."

Psychology and Mental Disease. For Use in Training-Schools for Attendants and Nurses and in Medical Classes, and as a Ready Reference for the Practitioner. By C. B. Burr, M. D., Medical Director of Oak Grove Hospital (Flint, Mich.) for Mental and Nervous Diseases; Formerly Medical Superintendent of the Eastern Michigan Asylum; Member of the American Medico Psychological Association, of the American Medical Association, etc. Fourth Edition, Revised and Enlarged. With Illustrations. Philadelphia: F. A. Davis Company, Publishers. English Depot: Stanley Phillips, London. 1914.

This book is one that is of great value to medical students and nurses and the present revision concerns itself largely with those subjects of especial interest to medical men. The book has been very materially enlarged and an entirely new section added entitled, "Symbolism in Sanity and in Insanity." Studies have been made of certain paranoid and hysterical states on the basis of Freud's researches and a more detailed description of symptoms and symptom groups incorporated. The section on "Management of Cases of Insanity from the Medical Standpoint" has been enlarged and improved.

This little volume contains 235 pages of text, has a good index and is very neatly and durably bound. It is an excellent book on this subject and it gives me pleasure to give it this short review in the Journal. Price \$1.50.

Hand book of Electro-Therapeutics. By William James Dugan, M. D., Lecturer on Electro-Therapeutics at Jefferson Medical College, Philadelphia; Physician-in-Charge of the Electro Therapeutic Department and Assistant in the Out-Patient Neurological Department of Jefferson Hospital; Fellow of the American

Electro-Therapeutic Association. With Ninety-one Illustrations. Philadelphia; F. A. Davis Company, Publishers, 1910. Price \$2.00.

This volume will prove of especial value to students and physicians who know little or nothing about electricity and electrical apparatus. The author has made his work clear, modern, exact, and concise; tells how to select electrical apparatus, how to use the apparatus after it has been purchased, when to use electricity in medicine, and, equally important, when not to use it. The work is not voluminous, does not give the theoretical details but only enough to give the student the practical points necessary for an understanding of the proper application of medical electricity. It gives in a clear and concise manner what the average physician should know of the different modalities and of their proper use.

As far as practicable, the detailed directions for the treatment of individual affections are given with precision both as regards the mode, the strength of current, the duration of each application and the frequency with which it should be repeated. These directions, of course, should be regarded as suited to the average case and conditions met with and must not be regarded as absolutely fixed.

Golf Invites Sociability.

From "The Game I Love" by Francis Ouimet in the July St. Nicholas.

"One thing at a time, and that done well," is a very good rule in golf, as in many other lines of either work or play. I speak of this because golf is a game in which the relationship between players is a bit different from what it is in any other game that comes to any mind. It is a game which, to reap the best results, demands great concentration, and yet a game which, at times, is played wonderfully well by those who seem to be paying scant attention to the task in hand. The game one moment brings men together and next sends them apart, according to the direction in which they happen to hit the ball; two men can start from the same tee, be two hundred or more yards apart after their drives, and both be on the same green after playing their second shots. It is a game which invites sociability, and yet does not either demand or require it. One man can go on out and play all by himself and thoroughly enjoy his game, or two men can go out, play a round together, neither speak a word between the first tee and the last green, yet both go into the club-house and declare they had seldom or never spent a more enjoyable time.

Our Gift to Colombia.

It would seem a lavish grant of money to pay Colombia \$25,000,000; for no man can argue ingeniously enough to make the punishment fit the crime. But the mistake of giving Colombia this large sum of money is nothing at all compared with the astounding shortsightedness of involving future generations. The special privileges accorded to Colombia would sooner or later make serious trouble and would almost certainly lead to war. For it would be held that these rights pertained to the people and territory of Colombia regardless of future political control. And if Great Britain or Germany should acquire control of Colombia we would,—for pure sentimentality and without rhyme or reason,—have given away to a great foreign empire certain rights in the canal superior to those of our people. If that country had any resources it could well have afforded to pay \$200,000,000 in consideration of the perpetual rights we have conferred. The very fact of our abandoning the Nicaragua route and going to Panama has of itself placed Colombia under perpetual obligation to us. All the apologies are due in the opposite direction. Colombia's bad faith was due to her deplorable and corrupt political condition in that period, and the separation of Panama was the right and necessary sequel.—From "The Progress of the World," in the American Review of Reviews for July.

Abstracts of the Leading articles of the month.

Microorganisms Isolated from Non-Ulcerating Cancerous Growths.—E. P. Minett concludes that the *Micrococcus neoformans* is identical with that type of *Staphylococcus albus* which can be isolated from deep tissues, both in human beings and in animals. The coccus isolated from deep tissues is merely the ordinary skin *staphylococcus*, modified by growing for considerable periods in the tissues where oxygen is absent or very scarce. The above statement is justified by the fact that an anaerobic growth of skin *staphylococcus* gradually assumes the characters of the *Micrococcus neoformans*. The serum of cancerous patients does not possess specific agglutinins for *Micrococcus neoformans* in a greater degree than does normal serum. Cancerous patients do not react in any marked degree to vaccine treatment with this organism. The temperature is not affected by large doses of the vaccine, nor

can specific opsonins be detected.—Proceedings of the Royal Society of Medicine.

Anatomo-clinical Diagnosis of the Genito Suprarenal Syndrome.—Gallais (Rev. de gyn. et de chir. abd.) says that suprarenal lesions generally consist of cellular proliferation, manifested in various ways. There may be (1) hypertrophy, simple or associated with supplementary suprarenals; (2) adenomatous hypertrophy of the cortical substance; (3) benign adenoma; (4) malignant adenoma; (5) cancerous hypernephroma. Associated with these tumors may be various genital abnormalities. In women the uterus, vagina, and tubes are congenitally small in cases of suprarenal hypertrophy — embryonic in appearance, and in whatever stage of life suprarenal hypertrophy may supervene this condition will be produced. The ovaries are small, fibrous, and of firm consistence, and may contain small cysts. The essential lesions, then, are corticosuprarenal proliferation, and ovarian atrophy. There is a remarkable relation between the function of the genital glands and hypertrophy of the suprarenal cortex. These lesions cause a marked perturbation of the equilibrium of the internal secretions. The author has minutely reported and analyzed sixty-seven observations which may be classified thus: suprarenal pseudohermaphroditism, suprarenal virilism, menstrual form, and obstetrical form. In hermaphroditism in the male one finds hypertrichosis, hypersthenia of muscular tissues and nervous powers, deep voice, and virility of character; in women, menstruation, soft voice, adiposity, gynecomastia, and mental feminism. In a child one finds a lumbar tumor; in an adult there are thoracic or lumbar girdle pains and mental troubles, accompanied by a tumor occupying the hemithorax, dull on percussion, descending below the umbilicus. In other cases the tumor is pelvic. The characters of virilism are much developed in a female giving the illusion of male sex by development of the genitals. The secondary sexual characteristics will be masculine. Pubertal changes are marked and begin precociously. Pseudohermaphroditism generally indicates a simple hypertrophy of the suprarenal cortex. In suprarenal virilism the suprarenal tumor develops in an individual without genital anomalies, and the changes are shown in the secondary sexual characteristic. At an early age appear secondary sexual characters of the woman and also those of the man in feminine subjects. First there are amenorrhea, and pelvic pains, nausea and vomiting. Adipose tissue develops, and muscular and nervous hypersthenia; the woman is abnor-

mally strong and believes herself in rugged health. There are nervous and mental symptoms reaching to maniacal agitation: the sexual instinct deviates: the character becomes violent, authoritative, and crises of agony develop, accompanied by vasomotor phenomena. There are increase of hair and pigmentation. A moustache and beard develop and hairs on the pubis and limbs. Pigmentation shows on the forehead, axillæ, back, forearm and hands. This stage lasts some months, and is followed by emaciation and cachexia, thoracic and abdominal girdle pains, asthenia, and appearance of a tumor. The patient becomes melancholy, the achilles and knee reflexes are abolished, the pulse becomes low in pressure, and there is leukocytosis. The disease ends in death in a crisis of cyanosis and asphyxia. In girls from four to eleven years of age we see adiposity, hypertrichosis, and lumbar tumor; menstruation begins before nine years of age. In boys there is premature development of sex characteristics; in man hypersthenia. Adiposity affects the trunk, and not the extremities; with cyanosis of the extremities. In the muscular type we get Herculean children. In the menstrual form, seen in women from twenty to fifty years old, there may be dysmenorrhea or profuse metrorrhagia, with adiposity, hypertrichosis, and pigmentation. In the obstetrical form the most frequent complication is tubal pregnancy, and sudden death from hemorrhage into the suprarenal is frequent. Differential diagnosis is difficult. The indication is to remove the tumor, but operative results have been bad. Irradiation of the suprarenals has been tried recently. In abortive cases, particularly near the menopause, opotherapy may be of value. Suprarenal, pituitary, or thyroid extract would increase the trouble; ovarian may be of value.

Isolation and Quarantine Periods in Common Infectious Diseases.—Ker (Edin. Med. Jour.) regards scarlatinal desquamation merely as an outward and visible sign that a person has had scarlet fever. The doctor approves of the rigid isolation of such patients when they are found in a tenement or class-room in which the disease has broken out. Their subsequent detention must depend on the facts of the case. He suggests that even an alteration of the accepted minimum period of isolation from six weeks to five would be a great step in advance. As regards the period of quarantine to be imposed on contacts, in hospital outbreaks he is content with five days. Perhaps seven days might be ample for schools. A diphtheria patient must be kept until the necessary negative cultures have

been obtained. Very often the illness lasts much longer than the infectivity. As regards the quarantine period the writer sees no use in continuing to quarantine perfectly well contacts who have given two successive negative cultures, which may well be obtained within three or four days. As regards children at any rate, cultures should be taken from every contact and the proved carriers isolated. There is little use in quarantining contacts for a fixed period, as, unless cultures are taken, it affords no security at all. The usual isolation period of measles is a fortnight from the period of eruption. The quarantine period for measles in hospital outbreaks is fifteen days. For rubella, Goodall's recommendation of isolation for seven days from appearance of rash seems ample. The long incubation period of this disease would appear to justify some attempt to employ the first two-thirds of it at least at school. Contacts could safely attend school for eight or nine days after exposure, and thereafter should be excluded until the twenty-first day is past. While the long periods of time in hospital spent by whooping-cough patients are of the very greatest advantage to the children themselves, in favorable circumstances and with otherwise healthy children, isolation until the whooping ceases is quite unnecessary. Of the great infectivity of whooping-cough in its prodromal catarrhal stage there is no doubt. Probably there is but little infectivity after the patient begins to whoop. Rigid isolation in a private house is probably unnecessary after the paroxysmal stage has lasted for a week or ten days. In chicken pox the author believes that a patient is infectious until the last crust has separated, but when any given crust has become naturally detached, the secondary scab forming in its place is not necessarily dangerous. As regards quarantine for this disease, the writer often allows contacts to be mixed with other children up to the eleventh day, when they are isolated until the twenty-second. In mumps he has never seen harm result from allowing patients out of isolation when a full week has elapsed after the disappearance of swelling. Exclusion of contacts from the thirteenth to the twenty-sixth day from the date of the first and last exposure respectively would be a quite safe rule for schools to adopt.

Spinal Changes In Pseudohypertrophic Paralysis.—Bruce (Edinburgh Medical Journal) found marked fatty infiltration of the muscles. There was proliferation of the sarcolemma nuclei, with atrophied, normal, and hypertrophied fibers, central nuclei, and considerable fatty infiltration and increase of the connective tissue. Many

cells in the anterior horn of the spinal cord were reduced in size and some shrunken. Chromatolytic changes were only found here and there. In most cases the cells contained well-stained Nissl granules, which were present even in the shrunken cells. Increase of pigment in the cells was not observed. The actual number of nerve cells present was diminished by about one quarter, but those remaining were either entirely normal or presented an appearance characteristic of diminished function, i.e., they were small, but possessed Nissl granules and processes. There was a slight increase in the neuroglia in the anterior horns, undoubtedly secondary to the diminution in the number of the nerve cells. The atrophy and diminution of these ventral horn cells corresponded to the atrophy and diminution in the number of the nerve cells. The atrophy and diminution of these ventral horn cells corresponded to the atrophy and diminution of the fibers in the anterior nerve roots, and on examining the nerve trunks in the muscles themselves similar changes were found, the fibers straining poorly, especially the myelin sheath, some being atrophied and the connective tissue in the sheath being increased. There was no evidence of any inflammatory process in the nerve sheaths. The pathological findings in this case are in favor of the view that the slight changes present in the spinal cord were merely secondary to the changes in the muscles.

Association of Acutely Fatal Illness in Infants and Children with Status Lymphaticus.—McNeil (Edin. Med. Jour.) Mentions a group of thirteen infants from two to four months old, nearly all found dead in bed, and all apparently well developed and nourished, the lungs in every case examined (eight) showed marked congestion, bronchitis, and bronchopneumonia. This was associated in most cases with hyperplasia, general or partial, of the thymolymphatic system. These cases of sudden death in infants may therefore be described as cases of fulminant bronchitis and bronchopneumonia, associated with status lymphaticus. The same pathological grouping was found in all cases examined of a very unusual series of fulminant bronchopneumonia in boys from ten to sixteen years old. The regularity of this association raises the question whether the fulminant nature of the illness in both groups may not have been due in some way to the influence of the morbid constitution usually termed status lymphaticus, the signs of which were unequivocally present in both groups. There is some evidence that fulminant types of other bacterial infections—scarlet fever



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and diphtheria—are also accompanied by thymolymphatic hyperplasia or status lymphaticus. In the two groups of fulminant pneumonia, thyroid hyperplasia in a marked degree was present in every case examined (eighteen.) This thyroid hyperplasia seems to have existed for some time before death. The regular association of thyroid hyperplasia with thymolymphatic hyperplasia suggests that it (the former) may also be a mark of the same abnormal constitution or diathesis.

Miscellaneous.

Report of the Board of Medical Examiners of the State of North Carolina.

Raleigh Meeting June, 1913. There were:

118 registrations for examinations.

37 failed.

1 obtained limited license.

80 passes a successful examination.

26 were granted license by reciprocity.

BENJ. K. HAYS, M. D., Sec.

Oxford, N. C.

Granted license N. C., 1914 by examination:

Charles W. Armstrong, Troy, N. C., Univ. Md. 1914 2yrs at col; Edward C. Ashby, Mt Airy Univ Pa. 1914 A. B. Trinity, N. C.; Ralph H. Baynes, Hurdles Mill Unvi. Md '14 1yr col.; W. D. R. Brandon, Statesville Univ. Md '14 High school; Joseph F. Belton, Mt Airy Univ. '14 High school; W. P. Belk, Charlotte Univ. Pa. '14 A. B. Univ N. C.; Oscar R. Black, Piney Creek N. C. Med. '14 High school; Roderick M. Buie, Bonlee Jeff '14 B. S. Wake Forest; Edmond J. Bryson, Cullowhee Bennett, Chi. '13 High School; F. McL. Bennett, Clinton Med. Col. Va. '14 High School; Thos. J. Brown, (col.) Raleigh Leonard '14 Col.; Earl L. Bowman, Liberty Med. Col. Va. '14 College; Clarence M. Bynum, Goldston Med. Col. Va. '14 High School; Geo. E. Bowdoin, Wilmington Med. Col. Va. '14 1yr Univ. N. C.; Roland S. Clinton, Gastonia Univ. Md. '14 1yr Univ N. C.; Numa H. Crews, Henderson (5) Jeff '14 High School; High School; Eugene R. Cocke, Asheville Jeff '13 2 yrs Univ. N. C.; W. S. Cozart, Jr. Stem Med. Col. Va. '14 High School; E. S. Clark, Clarkton Med. Col. Va. '14 A. B. Davidson; Joseph H. Caldwell, Winnsboro, N. C. Med. '14 A. B. Davidson; L. M. Fetner, Charlotte N. C. Med. '14 B. S. Davidson; Lokie M. Futrell, Severn Med. Col. Va. '14 High School; Robert F. Flowe, Kannapolis, N. C. Med. '14 2 yrs. School;

P. P. Green, Thomasville Univ. St. Louis '14 B. S. Wake Forest; Oscar J. Houser, Cherryville, N. C. Med '14 High School; Claud B. Hicks, Durham Univ. Md. '14 A. B. Trinity; Cecil S. Hassell, Greenville Univ. Md. '14 High School; Clair C. Henderson, Lowell Univ. Md. '14 High School; Joe A. Hartsell, Concord Jeff '12 2 yrs. col.; Marcus C. Houser, Cherryville, N. C. Med. '14 1 yr col.; Ronda H. Hardin, Boone N. C. Med. '14 2 yrs col.; Samuel W. Hurdle, Reidsville Jeff '14 A. B.; Jack H. Harris, Raleigh Jeff '14 1 yr school; L. S. Herndon, Dover Med. col. Va. '14; 1 yr school; Henderson Irwin, Charlotte Univ. of Md. '12 B. S. Davidson; Island L. Johns, (col.) Raleigh Leonard '14 A. B. Shaw Univ.; Wm. H. Kibler, Morganton Univ. Pa. '14 A. B. Univ. N. C.; John F. Kendrick, Charlotte Jeff '14 B. S. Univ. N. C.; Leland C. McIntosh, Henderson Atlan Med. '13 A. B. Wake Forest; Alfred Mordecai, Durham Univ. Md. '14 High School; E. P. Norfleet, Roxobel Med. col. Va. '14 High School; Wm. L. Orr, Matthews N. C. Med. '14 Col.; Adlai H. Oliver, Selma Jeff '14 1 yr col.; Karl B. Pace, Maxton Jeff '14 1 yr col.; Paul A. Petree, Germanton Jeff 1 yr col.; Robert E. Parrish, Smithfield Jeff 1 yr col.; H. L. Price, Unionville N. C. Med. '14 High School; Robert H. Putney, Elm City Med. col. Va. '14 3 yrs col.; Hubert A. Parris, (col.) Raleigh Leonard '14 col.; Nathaniel F. Rodman, Norfolk, Va. Jeff '14 3 yrs col.; Chas. T. Roebuck, Williamston Med col. Va. '14 High School; Wm. M. Scruggs, Rutherfordton Univ. Pa. '14 B. S. Wake Forest; Thos. G. Sharpe, Charlotte N. C. Med. '13 1 yr col.; David B. Ingold Univ. Pa. '14 A. B. Univ N. C.; Joseph A. Speed, Durham Jeff '14 2 yrs col.; Coite L. Sherrill, Catawba N. C. Med. 1914 B. S. Wake Forest; Charles E. Spoon, Kimesville, Univ. of Tenn. '07 1 yr. col.; Irving E. Shafer, Gold Hill N. C. Med. '14 1 yr col.; Robert R. Sellers, Orwello Med. Col. S. C. '14 1 yr col.; Chas. R. Sharpe, Linwood Jeff '14 B. S. Wake Forest; Sheldon, A. Saunders, Aulander Jeff '14 1 yr col.; George M. Smith, Unionville N. C. Med. '14 High School; Chas. C. Stewart, (col.) Greensboro Howard '11 col.; E. B. Shaw, Whitney Med. Chi. Phil. '12 1 yr col. Benj. A. Thaxton, Roxboro Jeff '14 B. S. Wake Forest; Silas R. Thompson, Lumberton N. C. Med. '14 High School; Raymond M. Troxler, Brown Summit Univ. Md. '14 High School; Lee F. Turlington, Mt Airy Univ. Pa. '14 col.; J. E. Tidwell, Andrews Grant Univ. Chat '03 High School; Hugh A. Thompson, Raleigh Univ. Pa. '14 A. B. Univ. N. C.; Jos. S. Thompson, (col.) Raleigh Leonard '14 col.; Thaddeus

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Granted limited license.

G. W. Locklear, (Indian) Pembroke Univ. Baltimore 03 None. Licensed to practice among the Indians of Robeson County.

Granted License in Raleigh, June, 1914 by reciprocity:

Frank E. Barr, Townesville, Univ. Va. 1908 Miss. A. & M. col.; Miss.; Holman Bernard, Welch, W. Va. Med. col. Va. '12 High School W. Va.; Edmund S. Boice, Richmond, Va. Univ. Pa. '09 B. A. W. & L. Va. Va.; Jas. B. Bullitt, Chapel Hill Univ. Va. '97 M. A. W. & L. Va. Miss.; A. L. Denchfield, Asheville Univ. N. Y. '05 B. S. N. Y. Univ. N. Y.; J. M. Earnhardt, Richmond Va. Med. col. Va. '13 col. Va.; W. H. Garrison, Whitney Atlas S. M. '09 High School Ga.; Martha Hayward, P. & S. Chi. '07 Normal College Ill.; T. B. Henderson, Henderson Med. Col. Va. '06 High School Va.; W. M. Hollyday, Asheville, Univ. Md. '08 High School Md.; F. J. Jarman, Roanoke Rapids, U. C. M. Va. '11 High School Va.; J. B. Johnson, Old Fort Univ. Louis '05 B. S. Tenn.; A. E. Knoefel, Asheville Univ. Louis '83 Ph. G. La.; R. Z. Linney, Hopeton, Okla. Univ. Gt. '01 2 yrs col. Okla.; E. P. Mallett, Hendersonville, Lined Col. '89 B. S. Hobart col. Va.; R. C. Milbee, Cove City Univ. Loui. '11 High School W. Va.; H. F. Munt, Boardman, Med. Col. Va. '11 High School Va.; Wm. A. Murphy, Goldsboro Univ. Va. '10 B. A. Univ. N. C. N. C.; P. P. McCain, Sanitorium Univ. Med. '11 Col. S. C.; N. H. Newman, Salisbury Jons. Hop. '13 A. B. Ran Mac. Va. D. C.; G. H. Packard, White Rock P. & S. Balt. '98 High School Mass.; J. J. Purdy, Oriental Med. col. Va. 1900 High School Va.; H. H. Purinton, Durham Bodoin '91 High School Mass.; John Saliba, Elizabeth City Univ. Edin '93 A. A. England; Joseph Shohan, Asheville P. & S. Bos. '01 High School Mass.; D. Lesene Smith, Spartenburg, S. C. Med. Col. S. C. '03 Col. S. C.

Board of Medical Examiners State of North Carolina—Questions Asked.

SURGERY.

1. Give symptoms and diagnosis of renal calculus.
 2. How would You control an obstinate case of Epistaxis.
 3. (a) Name varieties of fracture about the elbow joint.
(b) How would you treat a fracture of the Olecranon?
 4. (a) Name the varieties and degrees of burns.
(b) The treatment (briefly) of each degree.
 5. (a) Give indications for resection of the knee joint.
(b) Describe its Operative technique, only.
 6. (a) For what conditions, might a resection of the Small Intestines, be indicated?
(b) Describe one method of an end-to-end anastomosis.
 7. Describe Operative technique only, of a circular amputation of middle third of leg.
 8. Mention most frequent complications, which might follow, an ordinary abdominal operation.
 9. Describe Periuethral Abscess, as to its:
 - (a) Etiology,
 - (b) Complications.
 - (c) Treatment,
 - X. How would you treat a case of Syphilis, in its secondary stage?
 - (a) Drugs?
 - (b) Dosage?
 - (c) Method of administration?
- Answer Only eight questions.

PRACTICE OF MEDICINE.

1. (a) What are the symptoms and physical signs of Incipient Pulmonary Tuberculosis?
(b) Discuss the significance of the variation of the temperature.
(c) What value has the X-Ray and Tuberculin test in confirming the diagnosis?
2. Name all reflexes affected and state in what way (diminished or exaggerated) in following diseases: Paresis, Locomotor Ataxia, Hemiplegia, Multiple Sclerosis, Spinal Tumor.
3. Differentiate true Angina Pectoris from Neurotic Angina.
4. (a) What tissues of the body may be invaded by gonococci, and how is the infection transmitted?
(b) What is the treatment and the prognosis in Gonorrheal Rheumatism?
5. (a) What is meant by Gastric Atony

Hay Fever

Logically
Treated with

Sherman's Bacterins

Pollen irritation favors the development of pyogenic bacteria in the respiratory tract which then become a primary factor of the disease. Experience shows that the immunizing influence of an appropriate bacterin will either cure the disease or so modify it that it causes but little distress.

THE NEW NON-VIRULENT T. B. VACCINE —prepared from a special non-toxic strain of tubercle bacillus, A trial will demonstrate its therapeutic virtues.

Write for Literature

G. H. SHERMAN, M. D.

DETROIT MICHIGAN

(Myasthenia Gastrica)?

(b) What are the symptoms and treatment of Gastric Atony with anacidity?

6. (a) Give the most common types of Herpes.

(b) Give the pathology, symptoms, and treatment of Herpes Zoster?

7. Give symptoms and treatment of Hyperthyroidism and Hypothyroidism?

8. (a) Discuss briefly Serum Therapy.

(b) What is the theory of the action of Vaccines?

PHYSIOLOGY AND PATHOLOGY.

This paper counts as eighty in value. Each applicant is required to take an oral in addition to this. Write answers in a clear distinct hand, and do not use more space than the blank below each question. Do not run words together. All answers that are doubtful because of hand writing will be counted as missed.

(1) Define the following:—

Aphemia
Astigmatism.....
Haemolysis.....
Hypoleucocytosis.....
Hydrolysis
Megaloblast
Melenia.....
Poikilocytosis.....
Stercoraceous.....
Xanthuria.....

(2) Give classification of food principles and state relative nutritional value of each. Clasification.

Food value.

Elements contained

.....
.....
.....
.....

Give composition (in food principles) of mother's milk.

.....
.....
Of cow's milk.

.....
.....
Of an egg.

(a) the white
(b) the yolk

(3) Give causes of normal heart sounds.

(4) How does excess of serum escape from lateral ventricles of brain?

(5) Give life history of a red corpuscle in health, and discuss its changes in disease.

CHEMISTRY AND DISEASES OF CHILDREN.

1. What facts must be determined in order to ascribe a rational molecular formula to an organic compound?

2. How would you ascertain the presence of (a) organic impurities, (b) chlorides, and (c) nitrites, in drinking water?

3. Account (a) for the constant formation of sulphuric acid in the living body, (b) for its unique protective powers to the organism.

4. Cloudy urine: Name not less than five causes, and present the manner of reaching differential diagnosis.

5. Tell something of the colloidal state, and the reactions that go on in living matter.

6. Discuss the more serious sequelae of the eruptive fevers, with special reference to prevention and therapy.

7. Describe characteristic attitude and facial expression of (a) infantile scurvy, (b) cerebro spinal meningitis, (c) tubercular meningitis.

8. What diseased conditions in infancy retard the growth of body-length? Describe in detail the symptoms by which you would distinguish between them.

9. "High percentage albumen milk": Tell something of its preparation. What is its food value, and what are the indications for its use as a corrective of digestive disturbances in infancy?

10. Discuss the factors contributing to the prevalence of Summer diarrhoea in early life, placing them in the order of their importance. Make interpretation of the various kinds of abnormal infant stools.

Answer any six of the foregoing questions.

The equivalent of four other questions will be given orally and by laboratory process.

GYNAECOLOGY AND OBSTETRICS.

1. (a) Would you terminate a pregnancy of 3 ½ months or less supervening on

a case of pulmonary or laryngeal tuberculosis?

(b) If so, why; if not, why not?

(c) If so, describe method.

(d) Provided patient went to full term, give directions of care for mother and child from hygienic standpoint.

2. (a) Give instructions for care of mother's breasts for two months before and two week after parturition.

(b) Give instructions for care of child from completion of second stage of labor to end of second week after birth.

3. (a) Describe briefly the physiology of conception.

(b) Explain multiple pregnancy. (c) Explain extra uterine pregnancy.

(c) What particular part of the male and female elements is it that transmits the peculiarities of race, form, mentality, etc., from parents to offspring? Chromosomes neck piece.

4. (a) What do you understand by uterine polypus? Give surgical treatment.

(b) What do you understand by sub-peritoneal uterine fibroid? Give surgical treatment.

5. (a) What is Hematosalpinx? State some of the causes. Give treatment.

(b) What is Pyosalpinx? State some of the causes. Give treatment.

(c) Discuss very briefly tuberculosis of the Fallopian tube. State its comparative frequency as regards other portions of the genital tract. Give treatment.

6. (a) What is Amenorrhoea? When is it physiological? When pathological? State two or three causes of pathological amenorrhoea, and treatment of each.

(b) What is sterility as applied to a woman of child-bearing age? Give two or more causes and treatment of each.

(b) What is sterility as applied to a woman of child-bearing age? Give two or more causes and treatment of each.

This examination counts 60

Practical counts 40

The proper interpretation of these questions is an important part of the examination.

MATERIA MEDICA AND THERAPEUTICS.

1. Mention the symptoms you would get from long continued or toxic doses of the bromids. Give the symptoms of hydrargyris.

2. Name the three most used preparations of opium, and state how much of each represents one grain of opium. Explain the constipating action of opium.

3. Name several drugs that render urine alkaline. Give their doses. What class

of acids would you use to acidify alkaline urine: Give an example.

4. What would be your treatment in cerebral anemir and in cerebral hyperemia? What condition of the eye contraindicates the use of mydriatics?

5. Give the source from which derived, the dose, contraindications for its use, of anti-diphtheretic serum. Mention several of the principal anti-toxic serums, and the source from which derived.

6. Mention three specifics. Mention two principal hematics. State why strychnin is frequently combined with cathartics.

7. Give the official name, using the correct latin terminations, of Dovers powder, compound licorice powder, Fowler's Solution, Calomel, Hoffman's Anodyne, Saloi. Give composition of seidlitz powder; of compound cathartic pills.

8. Name the organs influenced by (a) a cholagogue; (b) a sialagogue; (c) an oxytoxic; (d) a diaphoretic; (e) a mydriatic.

ANATOMY, BACTERIOLOGY AND

PATHOLOGY.

1. Describe the endocardium.

2. Describe the pia mater.

3. Describe one of the vertebra.

4. Differentiate between synarthrosis, amphiarthrosis, and diarthrosis, giving an example of each.

5. Describe the inguinal canal.

6. Describe the right kidney.

7. Describe the fallopian tubes and give their relations.

8. How is the eye supplied with blood?

9. Describe the pathological changes occurring in acute phlebitis.

10. Describe the pathological conditions of gastric ulcer.

Need of Care in Handling Mesothorium.

Allmann (Deutsche Medizinische Wochenschrift,) records the following case: in a laparotomy for ovarian cancer, 160 mg. mesothorium were inserted intratumorally, an ordinary hole having been bored for its reception. The remedy was first enclosed in glass tubes, these in turn within silver tubes. These tubes are normally covered with a protective or nicked brass, but to secure the stronger action, the author stripped this off and substituted gauze, thin rubber, and again gauze, making a triple covering. After renewing the external gauze, the filter was placed in a recurrent nodule in the vagina which was then bleeding. As the silver coated tubes were being inserted one tubule of mesothorium was melted, but in the middle of the tube, the glass remaining intact. This tube was in use for four months, the probability being

INFANTILE DIARRHOEA

FROM THE MEDICAL REPORT:

Every food having failed and milk itself not being able to be digested, the child was fed on Virol and afterwards on milk (1 part), lime water (2 parts) and Virol. Virol was also given on the dummy the whole time as the child would not be quiet without it. The child consuming as much as 2 1/2 ounces of Virol a day. This treatment was maintained until at 49 weeks he weighs 17 lbs.; has cut all of his front teeth, and is in perfect health.

VIROL

A Preparation of Bone Marrow,
Red Bone Marrow, Malt Extract,
Lemon Syrup, Etc.

A FOOD INVALUABLE IN
INFANTILE DIARRHOEA

In daily use in more than 1000 Hospitals and Sanatoria
For liberal samples and interesting literature apply to
Sole Agents: THE ETHA CHEMICAL COMPANY, 59 Bank St., New York
In Jars: \$0.40, \$0.75, \$1.25.



Age 7 weeks. Weight 2 lbs. 13 ozs.
Before VIROL



Age 49 Weeks. Weight 17 lbs.
After VIROL.

that the rays had attacked the silver and denatured it. However, the tube did not break when placed within an orific, which showed that the glass and silver remained intact. While nothing detrimental occurred in this case a friable silver tube in breaking suddenly might fill the space with broken glass.

Bronchial Spirochetosis—Chalmers and O'Farrell (Journal of Tropical Medicine and Hygiene) believe that bronchial inflammation associated with the presence of spirochetes will be found very common in the Anglo-Egyptian Sudan. In the ten cases they have seen large numbers of Spiroschaudinnia bronchialis were found in the sputum, but relatively few bacteria, and no other organisms, such as fungi. The spirochetes are always present in abundance during an attack, diminish during convalescence, and are subsequently either abset or found with difficulty. Intratracheal inoculation of a healthy monkey with sputum from a case gave positive results. Tubercle bacilli were never found in the cases under observation, and the authors are convinced that the spirochete referred to is the cause of the affection. Chilling, however, may act as a secondary cause. The symptomatology is that of mild attacks of acute bronchitis, separated by intervals of good health or of a more chronic illness closely resembling the early stages of phthisis, and sometimes associated with slight hemoptysis. Complication with the pneumococcus was met with in one case. The diagnosis can be made only by examination of fresh sputum, preferably with dark ground illumination. The organisms, though numerous, tend to collect in special areas of the glm, and may therefore require a little search. The disease seems readily amenable to treatment in its acute phases. Rest in bed, good food and ven-

tilation, and arsenic in some form, preferably with glycerophosphates, are indicated. The drugs may be given by mouth, or intramuscularly as an injection: Sodium cinnamate, 0.05 gm.; sodium cacodylate and sodium glycerophosphate, of each 0.1 gm. The disease is probably transmitted by human carriers. The history of a similar attack should lead to an examination of the sputum, and if this prove positive, arsenic should be given for prophylactic purposes.

Phenalgin-A Dependable Analgesic.



The general medical practitioners of the country are using Phenalgin more extensively than ever before. The reason for this is easily found in the exceptional efficiency of this well known remedy as a prompt and harmless reliever of pain. Unquestionably, one of the noblest missions of the physician is to alleviate physical suffering, even though he cannot always eliminate it.

A short time ago, recourse to opium and some of its derivatives was the only reliable means of satisfactory analgesia. One does not need to mention the fearful results that all too often followed the exhibition of this insidious drug. As appreciation of the effectiveness of Phenalgin has extended, the use of opium and its preparations for the relief of pain has materially diminished, and now the hypodermic syringe is rarely employed except in extreme or emergency cases.

Surely this is a triumph for modern therapeutics, and those responsible for Phen-

algin take no little pride in the part they have played in helping to free humanity from the thralldom of opium. It is a significant fact that, in spite of the enormous use of Phenalgin during the past eighteen years, there is not a single authenticated case of serious ill effects from this remedy, when employed remedially. As a matter of fact, there are few remedies of established potency that are so notably free from deleterious action.

All in all, Phenalgin is one of the most valuable additions to the modern armamentarium. It is skillfully and carefully manufactured, and the physician can bank on its constant and unvarying uniformity. Its remedial value, every practitioner can easily prove to his entire satisfaction, and it is no idle statement that the manufacturers of Phenalgin ask its therapeutic preference on no other basis than its demonstrable uniformity, safety and pain-relieving power.

Serum Treatment of Gonorrheal Ophthalmia in the New-born.—Morax (Ann.

de gyn. et d'obst.) compares his results in the treatment of gonorrheal ophthalmia in the new-born with nitrate of silver and argyrol, and those obtained by injections of new gonococcic serum of Nicolle and Blaizot. His treatment is the daily use of 2 per cent. silver nitrate solution and hourly washings with physiological salt solution and this has given good results. Out of 110 cases there were but nine of corneal ulceration with perforation, and out of these nine in six there was ulceration when treatment began. Only a small number of cases have as yet been treated with the vaccine. Its effects on the symptoms have as not been encouraging. The writers conclude that if this vaccine is used it should be combined with treatment with nitrate of silver and argyrol, if we would save the largest possible number of eyes.

Rickets and Osseous Dystrophies in Animals Born of Parents Deprived of the Thyroid.—Claude and Rouillard (Presse

med.) have removed the thyroid in rabbits, and then have allowed the animals to procreate. In the young of such animals they have found changes similar to those found in human rickets, these were large abdomens, intestinal distention, congested liver, small spleen, large hemorrhagic kidneys, pale and atrophied muscles, normal nervous system, normal internal glands, and diminution of size of the skeleton. There was a distinct rachitic rosary in one rabbit. The bones of the legs were curved, the

epiphyses thickened, the pelvis contracted; the bones of the skull were smaller and very thin, teeth malformed, etc. In the bones there were tumefaction of the costochondral junction: intense vascularization of the flat bones of the skull, thickened epiphyses, incurvation of diaphyses, and softening of the bones. Thus in two successive generations of thyrodoctomized animals there were manifest arrest of development, and bony lesions comparable to rickets. The coexistence of rickets with other forms of dystrophies has shown clinically by other writers.

There is a manifest relation between rickets and failure of the function of the thyroid gland. Opothrapy has been found of value in rickets where the thyroid was small; thyroid extract has given excellent results in increasing growth and developing the nervous system through stimulation of nutrition. Rickets would seem to accompany intestinal toxo-infections, and pluriglandular insufficiency, with direct rachitic heredity. The authors believe that their experiments have shown that in the pathogenesis of rickets insufficiency of the thyroid hereditary or acquired, plays a prominent part. The descendants of victims of exophthalmic goiter are victims of poor development and congenital debility. Also in countries where goiter is common the children of goiterous women show rickets, myxedema, obesity and other forms of malnutrition. Thus hereditary dysthyroidism should have a prominent place as a cause of infantile dystrophies.

Experiments with Rosenbach's Tuberculin in Internal Tuberculosis of Children.—Stommel (Arch. f. Kinderheil.)

gives his results in the treatment of twenty-two cases of internal tuberculosis, in children; eighteen of lungs and bronchial glands and four of abdominal tuberculosis. This tuberculin is made from a six to eight weeks old culture of tubercle bacilli grown with trichophyton culture, and thus attenuated so that it is far less poisonous than old tuberculin of Koch. The results are tabulated and histories of cases given in full. Out of the eighteen pulmonary or bronchial gland cases there was marked improvement in six cases, slight in four cases, while five showed no change, and three became worse clinically, two dying. In one case there was a disappearance of lung sigus, but these were only slight on entrance. All the others remained unchanged or slightly changed, and the von Pirquet reaction was present after as well as before the treatment. There was no effect on the fever. The improvement in general health

was only such as would be expected in the more hygienic surroundings of the hospital. Increase in weight was not marked. The author concludes that in his cases the effect of the Rosenberg tuberculin was not such as to encourage its use as a curative measure in tuberculosis in children. In some cases the effect of the treatment was unfavorable.

Protection of the Infant Against Tuberculosis.—Nobecourt, and Schreiber (Arch. de med. des enf.) consider it of the greatest importance for its protection against tuberculosis to separate a young child from any relatives who have tuberculosis. He is not born tuberculous: tuberculosis is exceptionally hereditary. It is contracted in infancy from the surroundings. It may be prevented if the child is removed from the surroundings. It may be prevented if the child is removed from the infected home. The proportion of infants infected increases rapidly with age, therefore to be effectual, removal must take place early. There should be centers for placing out infants who are in danger of tuberculosis; parents of infants born in infected surroundings should be induced or remove their children from the home, and place them in the country. There should be centers for the bringing up of children, well superintended, and easily inspected medically. They may be in the country, in the mountains, or at the sea shore.

"The Ideal Laxative."

The ideal laxative or purgative is one that will produce as near physiological evacuation of the bowels as is possible without exciting excessive peristalsis. Such a laxative will accomplish its results in a natural manner without upsetting the digestive functions, causing griping or pain, or inducing reactionary constipation. That the medical profession have in Prunoids a laxative that presents these qualifications to a superlative degree is evident to the thousands of physicians who are using it day in and day out. They have found that Prunoids can be relied upon to stimulate normal secretion, increase the fluid content of the feces when deficient, and thereby bring about free and thorough elimination without irritation of the intestinal mucosa.

Hence it is that Prunoids have proven so valuable in treating the constipation or bowel torpor encountered in such diseases as neurasthenia, jaundice, anæmia, rheumatism, gout, and all other affectations where tonic stimulation of the functional activity of the bowels is so essential. Indeed, Prunoids exert so pronounced an influence

The Skin Syphilides

are remarkably amenable to the action of

BURNHAM'S SOLUBLE IODINE

Even the most intractable papulo-squamous lesions that have resisted all other measures can often be cleared up at once by this ideal preparation of iodine.

DIRECTIONS—Five to fifteen drops in water t. i. d.

CAUTION—Imitations of this product never give the positive results that the original does. To avoid disappointments and safeguard your results, specify "Burnham's" and if convenient, order an original bottle.

BURNHAM SOLUBLE IODINE CO.
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on the physiologic processes of the intestines that the effects are often prolonged for several days. Thus Prunoids do not induce the cathartic habit, as do so many other laxatives, but can be relied upon to accomplish results that rarely fail to persist for a long and gratifying period. Because of this very marked corrective action on the physiologic processes of the bowels, Prunoids have no superior as a remedy for the systematic treatment of chronic constipation of functional origin. It is no exaggeration to state, therefore, that no other remedy thus far offered for laxative or cathartic purposes produces more prompt, positive and permanent effects with such gratifying freedom from unpleasant or objectionable sequelæ.

Cod Liver Oil in Hot Weather.

It is not necessary to stop the employment of cod liver oil during the heated term. One need but employ Cord. Ext. 01. Morrhuæ Comp. (Hagee), from which the nutritive advantages attaching the crude oil may be obtained.

In Cord. Ext. 01. Morrhuæ Comp. (Hagee) the physician has at his command an admirable tissue food, and one which he may depend upon at all seasons of the year.

Success in The Practice of Medicine.

Collie states that in these days wealth not knowledge, ostentatious display not ability, is worshipped by the majority of mankind. It has been said that physicians are judged by the creases in their trousers, not by the creases in their brain. Wealth determines status. To make money is therefore a necessity. The physician should remember that the cards must always be shuffled, and if patients leave him, from a business point of view it does not really matter if his total income for the year is as large or larger than the year before. His object should be not to have the largest but the best practice. If the physician attends patients gratuitously he should take as his reward the pleasure he is entitled to if he is seeing them without any hope of benefit; but he should remember that this is charity not business. Successful men never neglect the treatment of a patient's personality. It is always difficult to listen to the recital of an irrelevant family history and of details which are obviously unimportant. The details may be trivial but it is a fundamental truth that the physician cannot succeed in treatment unless he has the confidence of his patient, and this he certainly will not have if he does not listen to the recital of the patient's woes. The torrent may often be stopped by a well-directed remark which shows that the physician has divined the whole history.

Success may take the form of financial gain, social aggrandizement, or self-satisfaction. Apart from the proper provision for one's old age and for one's dependents, financial success is not desirable in the medical profession, for it cannot be attained (except by the few) without making sacrifices which are inimical to the growth of those qualities which ennoble one's work. Social success is Dead Sea fruit. The success which brings true self-satisfaction is the Mecca to which the practitioner should be guided, for unlike the above ephemeral successes, but like the heaven and hell of the new theology, she is with him now; if he would woo her successfully she is his abiding portion. To be successful the practitioner should know how to depute work to others—work of which they are capable but which if performed by the practitioner himself would interfere with the proper development of his career. The hard-worked general practitioner who does his own dispensing or his own bookkeeping has much to learn, but he is probably one who never will.

An important detail in medical economics is the precaution that in arranging for partnership or assistant agreements the physician should commit the bargain to a pa-

per at the earliest possible date, and this should always be done before the new arrangement most people mean to act fairly by one another, but no one has a memory which is perfect, and verbal contracts are apt to be remembered only in part.

The road to success is well described in the following pointed paragraph from Claye Shaw: "Whatever way success is achieved, there are four mental necessities, namely, a clear view of the end, a judicious indifference to the sentiments aroused by the sweeping away of obstacles, and indomitable energy, a power to resist the temptation to rest on the soporific plains of mediocrity."—British Medical Journal.

Patent Ductus Arteriosus.—Wynter reports the case of a female patient, aged 35, who was admitted on December 19, 1913, for hysterectomy on account of uterine fibroids. The patient had been admitted twice during the past two years, once at St. Mary's Hospital, and once at St. Bartholomew's Hospital; at the former, operation was though inadmissible on account of the heart condition. The same doubt arose at the Middlesex Hospital, but the view that the murmur was due to a patent ductus having been arrived at, no objection remained either to the operation or to the anesthetic. Total hysterectomy was performed on December 20 by Sir John Bland-Suttog. No trouble was experienced with the anesthetic, the patient bearing the operation well and making a very rapid recovery. The patient had scarlet fever at the age of seven. "Cardiac weakness" had been diagnosed for five years since the third and youngest child was born. With the dysmenorrhea which occurred during that time, there were often associated pseudo-anginal attacks. A loud systolic murmur was heard in the third left intercostal space, accompanied by a thrill. There were no appreciable cardiac changes or enlargement. The temperature was normal and there was no dyspnea, even on exertion. The patient played hockey and cricket in girlhood, and activity had not been restricted by the heart condition. No secondary changes, such as enlarged liver or edema, had occurred. By the X-ray screen the heart appeared normal in size and position, but there was bulging of the pulmonary artery above the heart shadow (second and third ribs).—Proceedings of the Royal Society of Medicine.

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to the most expensive proprietary food, lack the necessary amount of proteid or some of those hematinic constituents which are essential to the proper development and growth of the infant. Fortunately these food constituents may be added in the form of Bevhine, which is particularly rich in proteins (14.7%) and haemoglobin (8.35%) and other compounds which promote the formation of red blood corpuscles and elevate the tone of the metabolic processes of the body. In this capacity it is an essential part of the dietary in the cure or prevention of rickets, scurvy, marasmus, malnutrition and all anemic conditions of childhood.

The addition of anywhere from fifteen drops to a teaspoonful of Bevhine to each bottle of food given the infant will cure or prevent the development of these conditions so frequently occurring in artificially fed infants between the ages of two and twelve months.

The Delicate School Girl,

Even the most robust and generally healthy children show the deleterious results of the modern system of education "forcing" that prevails in most of our larger cities. The child that starts the school year in excellent physical condition, after the freedom and fresh air of the summer vacation, in many instances, becomes nervous, fidgety, and more or less anemic, as the term progresses, as the combined result of mental strain and physical confinement in overheated, poorly ventilated schoolrooms. How much more likely is such a result in the case of the delicate, highstrung, sensitively organized, adolescent girl? It is certainly a great mistake to allow such a girl to continue under high mental pressure, at the expense of her physical health and well being, and every available means should be resorted to to conserve the vitality and prevent a nervous breakdown. Regularity of meals, plenty

of sleep, out-of-door exercise without fatigue, open windows at night and plenty of nutritious food, should all be supplied. Just as soon as an anemic pallor is noticeable, it is a good plan to order Pepto-Mangan (Gude) for a week or two, or as long as necessary to bring about an improvement in the blood state, and a restoration of color to the skin and visible mucous membranes. This efficient hematinic is especially serviceable in such cases, because it does not in the least interfere with the digestion nor induce a constipated habit.

Treatment of Eczema of Nurslings with

Pellidol Ointment—Rominger (Arch. f. Kinderheil,) has found good results in skin diseases of infants from the use of pellidol which contains a substance related to scarlet red, diacetyl-amido-toluol, and has a good effect on the epithelial structures. The author made use of this ointment in fifteen private cases of skin disease, using the salve alone without changing the diet and hygiene. In the clinic there were fourteen such cases—five of eczema, seven of intertrigo, one of pemphigus neonatorum, and one of impetigo contagiosa. The crusts were first removed with oil, and the pellidol salve smeared on gauze and applied to the diseased surface, being changed daily, and the patient being prevented from scratching by covering the hands with sleeves. In eczema of the head and face the exuding surface soon became dry and healthy epithelium covered it. Wet cases received the most benefit. If a 1 per cent. salve was used the effect was good, while a 2 per cent. salve caused redness and irritation, which rendered healing slow. In the seven cases of intertrigo, healing soon took place. The other skin diseases were similarly affected.

Eosinophilia and the Exudative Dia-

thesis.—Kroll-Lipschutz (Monatsscler. f. Kinderheil,) says that the lymphatic temperament includes children who show skin

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affections, mucous membrane affections, and symptoms due to the lymphatic apparatus. The author has examined children subject to eczema, mucous Membrane diseases, etc. His conclusions are these: Eosinophilia is constant in children with eczema, recurrent urticaria, and asthma. In older children who have had eczema but have recovered, the eosinophilia persists. Eosinophilia remains a constant blood condition in children who have suffered from skin troubles. Thus eosinophilia is a co-ordinated and constant symptom of the skin manifestations of the exudative diathesis and may rest on a constitutional basis. In recurrent bronchitis and pharyngitis in small children without typical asthma and in obscure dyspepsias no eosinophilia is found. Eosinophilia accompanies constantly the skin manifestations of the exudative diathesis, but not the mucus membrane and stomach symptoms.

Treatment of Severe Menstrual Pain and Excessive Bleeding by X-rays—
Hernaman-Johnson in the (London Practi-

tioner, says of this method of treatment that hemorrhage is more quickly relieved than other symptoms. The period immediately succeeding the commencement of treatment is no better, and may be worse than usual. The second period is delayed. It will probably show slight improvement but more attention should be paid to the patient's feelings during the interval. If she felt even a little better, it is worth going on. During the second interval, there should be a distinct advance, and the third period ought to be less severe than usual. Improvement, once started, will continue for some months after x-rays have been discontinued. The writer gives the technical details of the treatment which he thinks does not produce sterility. He goes so far, in fact, as to state that it is doubtful whether even the heaviest therapeutics doses can cause more than temporary barrenness excepting in women near the menopause.

Nascent Iodine in the Treatment of Pulmonary Tuberculosis.

Reeve, (The London Practitioner) reports the results obtained among 76 cases in a large infirmary by the intensive liberation of iodine in the organism through the interaction of chlorine on potassium iodide. Chlorine water is first prepared by allowing two drams of concentrated hydrochloric acid to act on one dram of potassium chlorate in a dry 24 ounce (one litre) bottle. When the colored gas reaches the neck of the bottle, the latter is tightly corked and the reaction allowed to continue for fifteen minutes, after which water is gradually introduced and shaken with the gas, until the bottle is filled. The treatment consists in giving the patient 30 grains (2 grams) of potassium iodide in a half pint of water at breakfast time—7 a. m.,—and four hours later, one ounce of chlorine water in a half pint of lemonade. At first, 3 ounces of chlorine water are given daily, at two hour intervals. This produces signs of iodism, which pass off after four or five days. At the end of three weeks the dose of chlorine water is increased to 4 ounces, and later to 5, without further ill effects.

This treatment produces a marked inflammatory reaction around all infective foci in the body. This results in an initial rise in temperature in nearly all cases, most pronounced about the third day. Later, the temperature shows an improvement. The beneficial effects of the treatment appear very rapidly, the sputum becoming steadily more mucous, and decreasing in quantity to a practically insignificant amount. Corresponding improvement in the cough, with eventual complete cessation, and relief from insomnia, takes place. All but three of the patients gained in weight, the increase being about 12 ounces a week in favorable cases. The appetite was augmented. One third of the cases treated for three months became from tubercle bacilli in the sputum. Mixed infection in the sputum was overcome in each of a series of thirty cases in which it had been found to exist. In those patients whose condition was known by physical signs, there was great improvement as regards the moist sounds, though the dullness showed little change, and in a few cases increased. On the whole, the effects of the treatment are beneficial, though the author is not as yet able to state whether it will produce permanent cures. An advantage of the plan is that after the first week the patient does not need to be under constant surveillance and can continue to work.

July Century News Notes.

The thrifty European farmer is said to come in for high praise in an article called "Two-Story Farming" by J. Russell Smith, announced for the July Century. American farmers, amateur and professional, may learn from this paper a new wrinkle in crops.

Hay Fever, both acute and chronic, is being successfully combatted with Respirazone. Those of the profession not familiar with the article may obtain a free sample by writing to The Tilden Company, New Lebanon, N. Y., or St. Louis, Mo. This is one of the very reliable prescriptions in Hay Fever and Asthma, and has rendered valuable service.

The Neurasthenic Invalid

Like he poor, the neurasthenic is "always with us," and while the stress and strain of modern life and living continue, the physician will be called upon to treat the more or less chronic invalid who exhibits all sorts of bizarre symptoms, in endless and kaleidoscopic variety. It is, of course, an easy matter to advise the physician to search out and remedy the operative cause of the disorder, but it is not always as easy to do this, especially when no organic changes are discoverable. While purely symptomatic treatment may be unscientific, it is usually essential, in order to gain and retain the confidence of the patient. There is, however, one pathologic finding in a large majority of cases, and that is anemia of greater or lesser degree. In some instances this may be found to be the essential cause of the neurotic symptoms. In any event, this condition should be corrected, and for such purpose there is no better remedy than Pepto-Mangan (Gude). When a hematinic is indicated for a nervous, cranky man, or a finicky, more or less hysterical woman, Pepto Mangan is peculiarly serviceable, as the patient cannot consistently object to the taste, which is agreeable to every one. The digestion is not interfered with in the least, constipation is not induced, and the blood-constructing effect of the remedy is prompt and certain. It is always worthy of trial not only in the anemia of the neurasthenic invalid, but also in all conditions of blood and tissue devitalization.

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Notes on a simple Method for Diminish- ing Chloroform and Ether Sickness.

In the (British Medical Journal) Renton deals with this topic. Having observed that cases of gastroenterostomy treated in the Fowler position had very little post-anesthetic sickness, he has for the last six years raised the upper end of the patient's bed on blocks twelve inches high in all cases after chloroform or ether anesthesia. This he continues for twenty-four or thirty-six hours.

This plan has been followed by a great diminution in the amount of sickness. By the old method in which patients were kept lying in bed with the head very low, the amount of sickness was very great in many cases. The staff nurses at the Western Infirmary and nurses in private confirm the statement that the improvement since the upper ends of beds were systematically elevated has been very great, and in consequence the suffering to patients and the labor to nurses are very much less.

The reason that this method is satisfactory is purely mechanical, as it is more difficult to be sick in an elevated position than with the head low. Certain patients are,

of course, very sensitive to the influence of chloroform and ether, but even when on previous occasions patients report that they suffered for days with sickness, when in the elevated position the sickness very soon passed off.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that

every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Thorium X in Pernicious Anaemia.

Arneth (Berl. Klin. Woch. 26th January 1914) gives a summary of recent publications on the use of this method of treatment and an account of his own experience. He recommends that the emanation should be given by intravenous injection, and that very small doses on rabbits he found that when doses large enough to produce a harmful effect upon the red corpuscles were given their action upon these was always preceded by a diminution of the white corpuscles, so that by careful and systematic examination of the white corpuscles the physician possesses a guide in treatment. In one case of which details are given, an arsenic course had been instituted, and though the red corpuscles rose from 1,008,000 to 2,048,000, rapid relapse took place; when the thorium X medication was tried the reds rose to 3,000,000, and the patient regained health and strength to a marked degree. The white cells changed also in type from 40 per cent. lymphocytes with 53 per cent. neutrophils. In this case 300 electrostatic units were administered in the course of three months, and the writer recommends that about 20 electrostatic units form a suitable dose every four days in cases where the red corpuscles are reduced to about 1,000,000 per c.mm.—Edinburgh Medical Journal.

Liberation and Preservation of Great Omentum in Colectomy

Lardenois and Okinczyk (Bull. et mem. de la Soc. Anat. de Paris,) show the importance of setting free the posterior layer of the great omentum so as to have it when the transverse colon is removed, partially or otherwise. They point out how the anterior two folds of the omentum pass from the lower border of the stomach; bearing the branches of the gastroepiploic vessels which nourish them. The folds turn up till they reach the transverse colon and then pass over the transverse meso-colon to the posterior parietes. Thus is the portion of the omentum Lardenois and Okinczyk lay stress upon. It adheres to the upper layer of the mesocolon, but its vascular supply is from the gastro-epiploic vessels, whilst the mesocolon is supplied by the colica media artery, and the few vessels in the connective tissue uniting these folds hardly require ligation. Hence, when stripped off the mesocolon, the posterior portion of the omentum is not deprived of its vascular supply. It is a mistake to

suppose that even in the adult this portion is blended intimately with mesocolon in the way that all the omentum folds are blended in the pendulous portion of the omentum below the transverse colon. On the contrary, it is not very difficult to strip it off the mesocolon if the operator begins at the hepatic and splenic flexures and then separates the middle portion of the adherent folds. The most likely accident, especially when the operator begins in the middle, is the laceration of the omental folds so that the omental cavity behind the stomach is opened up, but there is little fear of the transverse mesocolon being torn. The authors declare that even where local inflammatory changes existed they have succeeded in isolating the great omentum with its epiploic vessels intact and saving it entire. After the separation the transverse mesocolon can be clearly inspected and its vessels stand out in relief and can be ligatured separately. The advantages of saving the omentum, where malignant or tuberculous disease is absent, are evident.—British Med. Jour.

Rigidity of Calcified Arteries.

It is held by MacCordick that during life the calcareous matter in the arterial wall is not present in the form of rigid plates. It is there, but in the state that may be compared with unset mortar. It is generally accepted by chemists that the process of setting of mortar is one of conversion of calcium hydroxid into calcium carbonate by the absorption of carbon dioxide from the air. Kept under an alkaline solution, or kept in bulk away from the air that contains carbon dioxide, mortar remains unset. A mixture of calcium carbonate and calcium phosphate remains soft so long as it is in an alkaline medium; placed in an acid solution it sets. Also the more strongly acid the medium the faster it sets. The reaction of the tissues and body fluids during life is alkaline, but becomes acid shortly after death. It is deserving of particularly, in the second place in connection with arterial calcification, that the gas which after death replaces the blood within the arteries is largely composed of carbon dioxide. Without doubt, when there are large areas of necrosis appearing in the tissues, there the production of acid is the cause of the setting of calcareous matter. For instance, it is the experience of the gynecologist that a calcified fibroid of the uterus may be found of stony hardness even while in the body; so also MacCordick's experience is that in a case of senile gangrene the arteries of the necrosed or gangrenous area are of stony hard-

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ness, whereas, the same arteries higher in their course, where the circulation is still maintained, are soft and pliable and can be ligatured with ease. In short, he says, in arteries provided with an adequate circulation the calcareous matter, whether it be in the intima or the media, remains upset. It is easy, then, to understand why, after handling pipe-stem radials, there is no thrombosis and gangrene, easy to under-



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stand why rigid and tortuous splenic and other mesenteric arteries in the aged arteriosclerotic do not undergo traumatic rupture. During life they are not rigid. It is easy also to understand the occurrence of extensive so-called atheromatous ulceration of the aorta without thrombosis, commonly occurring during life. Those ulcers, in short, and the saucer-like plaques with surrounding rupture of the endothelium are post-mortem productions. The calcified areas become in the intima set and rigid before the muscular contraction of the aorta gives way and the tube undergoes dilation. The result is that a tension on the endothelium at the edges of the plaque induces rupture of the lining.—British Medical Journal.

Treatment of Dysmenorrhea.—Baudler (Archives of Diagnosis) points out that to assure a dysmenorrheic patient that the cervix, because of its length, rigidity, or stenosis, is the primary factor in the trouble is to tread on uncertain ground. To perform a surgical dilatation of the cervix and make it more or less permanent by the use of an intracervical stem or by a cutting operation, without first knowing that the cervix is the main offender, often leads to a disappointment. If one is able, on the other hand, painlessly and without danger of infection or tissue injury, to dilate the cervical canal two or three days before menstruation, or even when the pains have begun, and the patient is thereby relieved of the dysmenorrhea, any surgical procedure then thought necessary can be done with considerable certainty as to the result.

To dilate the cervix painlessly and safely, he finds most advisable the use of the galvanic current. The writer employs aluminum sounds of various diameters, always smaller than the size which might be used if a little force were applied. A large plate is applied to the abdomen or under the sacral region, the negative pole being in the uterus, and a current of from five to ten milliamperes is passed for five to fifteen minutes. The intracervical negative pole causes a relaxation of the muscular fibres, the sound thereupon slipping out. At the same sitting or the next, a somewhat larger electrode may be substituted, and this may be repeated as judgment dictates, the electrode being always drawn out as soon as the patient experiences pain or discomfort. The intracervical pole causes, especially if a white or yellow secretion is present, an oxidation of the secretions with resulting production of bubbles. If the electrode fits too closely in the cervix and there is no egress for this frothy product, an increase

of pressure occurs in the uterine cavity and cervix, pain resulting. If one, two, or three treatments on successive days before menstruation lead to a painless menstrual flow, fairly satisfactory proof is afforded that the cervix plays an important in the production of pain in the individual case. In many cases the author has, by the procedure described above, given relief from uterine colic.

Osteoperiostitis of Upper End of Femur.

Fairbank reports the case of a girl, aged five years, who was brought to the out patient department of the Great Ormond Street Hospital in July last with a history of wasting and pain in the right leg. Nothing definite could be made out at first. On subsequent visits complaint was again made of pain in the leg. This pain occurred particularly when the child got up in the morning. Tenderness in the adductor region was noticed, but no swelling or thickening of the femur. In September a skiagram showed a thickening of the upper part of the shaft and neck of the femur. This thickening now present could then be felt in the region of the lesser trochanter. When asked to point to the site of the pain the child always pointed to the inner part of Scarp's triangle. The child limped slightly. She was admitted to the hospital for rest and investigation. Beyond the thickening and tenderness at the upper part of the femur nothing could be made out. There were no signs of disease elsewhere. The right hip joint seemed to be normal. No history of specific disease could be obtained and the Wassermann reaction gave a negative result. Mercury and iodides were given without effect. The temperature was never above 99° F. So long as the child was in bed she was free from pain, but as soon as she was allowed to get about again she complained of the pain. Her past history contained the facts that she had "bleeding piles" a few months previously and lost much blood, and that she had pneumonia four years previously. There was no history of traumatism. The skiagrams suggested an inflammatory lesion, not a new growth. The case is reported on account of the obscurity of the cause. It is suggested that an operation should be performed with the object of cutting a deep groove in the affected portion of bone.—Proceedings of the Royal Society of Medicine.

Cramps of Cholera Morbus.

The approaching season of heat, with its following train of stomach and intestinal diseases, emphasizes the proven value of Hayden's Viburnum Compound in Cramps of Cholera Morbus and Muscular Cramps.

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Dr. Torald Sollman in his text book "Pharmacology" Page 510, recommends Viburnum Opulus in Muscular Cramps.

"King's American Dispensatory," Page 2059, Vol. 2. refers to this same product in like conditions.

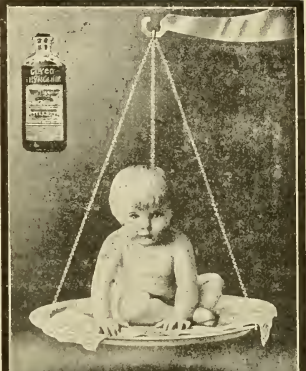
Prof. Potter in his "Materia Medica, Pharmacy and Therapeutics," Page 266, recommends the employment of Dioscorea Villosa in Cramps of Cholera Morbus, and Prof. Ellingwood in his text on "Materia Medica and Therapeutics," Page 336, also advises its employment.

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Vaso Motor Derangements.

The part played by the vaso motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most common functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

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Coca-Cola and Fatigue

The physiological and chemical basis of bodily fatigue constitutes a question of real importance in therapeutics today. The causes of fatigue, its effect upon the organism in lowering vitality and diminishing mental and motor activity present an intensely interesting study and one that has great bearing upon the conditions under which most of us live.

Muscular fatigue produces poisons that pass into the blood, and clinical experiment has shown that people who are fatigued are much more subject to contagious and infectious diseases. Yet fatigue, mental or motor, is part of the daily life of most people engaged in modern industry, and its results must be reckoned with so long as the conditions existing at present remain unchanged.

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found the most serviceable and effective agency for restoring the necessary equilibrium. It is with these beverages that Coca Cola is to be classified. Although having a smaller caffein content than either tea or coffee, it is equally satisfactory in furnishing relief from fatigue and, in addition, is extremely pleasant to the taste and wonderfully thirst-quenching.

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Infantile Obesity.—Mouriquand (Ann. de med. et chir. inf.) in considering the subject of infantile obesity gives us a clinical study, including the cases of most interest that have been published since this subject has attracted notice. Among them are cases of adiposogenital syndrome accompanied by tumors of the hypophysis recognized at operation or autopsy, by traumatism of the hypophysis, or by tumors of neighboring regions: also those in which there was hydrocephalus, and in which there were no known lesions of the hypophysis. Some were associated with gigantism, acromegaly, nanism, or myxedema. Dercum's disease, or painful adiposity is included here. In connection with infantile obesity there are genital changes, in the female involving infantile conditions of the ovary and uterus, and amenorrhea, or irregular menstruation; in the male infantile testicles, and absence of secondary sexual characteristics. Accompanying these may be nervous and psychical troubles. When a tumor is present pressure symptoms occur, bitemporal hemianopsia, headache, somnolence, intellectual apathy, or epilepsy. In animals the hypophysis has been removed, and when the operation has been recovered from similar symptoms have been produced. The growth of the young animal

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is arrested; and the animal becomes very fat without increasing in weight. The sexual development is arrested. The adiposogenital syndrome is not in all probability produced by the disease of the hypophysis alone, but by its effect on the other glands of internal secretion, which appear to be interdependent. The thyroid becomes colloid, the thymus hypertrophies in young animals, the suprarenals and pancreas become altered. Obesity is a disease of retarded nutrition, and lessened oxidation, and is akin to diabetes, and to arthritis. Surgical treatment of tumor of the hypophysis has been of value. It has resulted in a partial regression of the syndrome. The x-rays also have proven of value, especially if applied when the skull is open. Opothrapy has been of benefit also in some cases. The best surgical results have been obtained when opothrapy has been used after the operation has been done. The author concludes that infantile obesity should not be considered as an entity, but as a complex pathological syndrome. Alteration or functional disturbance of certain glands of internal secretion, especially the genital glands, thyroid, and pituitary body should be considered responsible for the dystrophy. Pathological or experimental lesions of the hypophysis cause in infants and in young animals a syndrome characterized by increase in fat, atrophy of the genitals, and nervous manifestations, which are also seen in many so-called cases of essential obesity, which allow us to suppose that they have a lesion of the hypophysis. A study of the metabolism in cases of obesity, especially with reference to the hydrocarbons, brings us to recognize its relations to diabetes and raises important problems of heredity and prognosis. Aside from dietetics treatment of this syndrome has been successful enough to warrant further efforts in this direction.

Pathology and Symptoms of Thymus Disease.—Klose (Jahrbuch f. Kinderheil) says that his observations of hypertrophy of the thymus gland coincide with those of Basch. The doctor finds that dogs which have had the thymus removed when under four weeks of age show marked changes in the bones. The bones of the extremities, especially the hind legs, show changes similar to those found in human rickets. They are smaller, thinner, and are easily fractured by the hand. There is a thickening and broadening of the line of junction between epiphysis and diaphysis. The gait of the animals is wabbling and uncertain. There is evident weakness of the muscular system, and flat-footed gait. When fractured the callus formation is less than in

control animals. These changes are similar to those of spontaneous rickets. Autopsies have shown compensatory hypertrophy of the lymphatic apparatus. The final stage is one of cachexia and ends in coma. Disturbances of the endochondral ossification zones cause irregular ossification lines. The spinal cord is hyperemic. In the author's experiments the thymectomized dogs showed a fat, pasty condition, and infiltration of the muscular system with fats. This was followed by a lessening of muscular power, falling of the hair, and trembling of the body. The first characteristic bone change is the widening of the zone of bone formation. The second is the formation of a broad, less compact osteoid layer in place of the true bone. In the skull there are spots deprived of lime. Rats, swine, and chickens show similar changes. The author concludes that in thymectomized animals the same changes are found that are characteristic of rickets. In these animals dentition is delayed and irregular. In the central nervous system acidity of the brain substance is present, and it is more watery. There is an increased irritability of the peripheral nerves. The muscles show atrophy. The thymus has been called a blood-producing organ, but the author believes that while its internal secretion stimulates the formation of blood cells by the other organs, the organ itself produces none. Experimental work goes to show that disease of the thymus results in grave changes in circulation and blood pressure. Intoxication is characterized by lowered blood pressure and final cardiac death. Removal of a hyperplastic thymus in children causes symptoms similar to those of Basedow's disease in the adult, dyscrasia, and heart disturbances. Matti found increase in the chromaffine cells after removal of the thymus. Adler found with hyperthymization also a hyperadrenalinemia. There appears to be an antagonism between the thymus and the genital glands. When the thymus has been removed the genitals are found increased in size and with supranormal parenchyma. Involution of the thymus takes place when the development of the genital apparatus goes on. Hypertrophy of the thymus causes pressure on the aorta, esophagus, or windpipe. The x-rays assist in the diagnosis of hypertrophy, and operation may be necessary to save life.

Gallop Rhythm and Extrasystole in Diphtheritic Myocarditis.—Blacher (Jahrbuch. f. Kinderheil) declares that there are two types of gallop rhythm found in diphtheritic myocarditis, presystolic and protodiastolic. These two types are more theoretic than practical, the difference having

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no influence on therapeutics or prognosis. The change in rhythm is a sign of heart weakness, yet the cause is different; the presystolic gallop rhythm is an active symptom, and there is a qualitative and quantitative change in the auricular action; the protodiastolic has to do with a passive condition in the beginning of the diastole. Romberg and Passler see the cause of the trouble in a medullary paralysis of the arteries, resulting in low blood pressure, partial filling of the vessels, and a large amount of the blood being held in the splanchnic circulation, thus rendering the other organs anemic. They are decompensation, slowing of the lesser circulation, swelling of the liver, and dilatation of the heart. We have to deal here with two factors, disturbances of the vasomotor centers and of the heart muscle at the same time. In diphtheritic myocarditis the tonus of the vegetative nerve system is of the greatest importance for the power of the heart. Diphtheritic poison is in the first rank of influences on the medullary centres. The doctor gives interesting histories of a number of cases, and sums up his conclusions thus: Gallop rhythm and extrasystoles appear with the beginning of the effects of the poison on the heart and this effect is seen in the circulation. Protodiastolic gallop rhythm is seen generally in severe myocarditis with decompensation and dilatation, while the presystolic is found in slight forms, and often indicates the appearance of kidney affections. Therefore the differentiation of these two forms has prognostic value. Increase of resistance in the general circulation manifests itself in constriction of the vessels and

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the decompensation and dyspnea arise from disturbances in the vasomotor system. The fact that presystolic gallop rhythm may be found in light as well as severe forms goes to show that it is not dependent on the grade of the anatomical lesion of the heart. It is a warning of active poisoning. A pathological increase of function of the musculature of the ventricles during diastole may be the cause of the protodiastolic gallop rhythm, and may come from increase of pressure in the general circulation. The cause of presystolic gallop rhythm is not always to be found in an increase of auricular systole. Clinical symptoms of diphtheritic myocarditis show that the dependence of gallop rhythm on influence on the central nervous system is probable. It apparently depends on an increase of the vagotonus; an overinfluence of the sympathetic system and increase of automatism arises. Therefore the occurrence of gallop rhythm is not a precise indication of the degree of anatomic lesion of the heart muscle, although gallop rhythm and changes in heart muscle often occur together. A causal relation between these two factors may be predicated only so far as the heart muscle injured by the diphtheritic poison loses the power to react to nervous, mechanical, and other influences. The same conclusions are probably correct for the extrasystoles and their clinical meaning is to be considered in the same light.

Rhabdomyosarcoma of the Uterus.—

Glynn and Bell (Jour. Obst. and Gyn. Brit. Emp.) have collected fifteen undoubted cases and three probable ones, and have added two cases of their own. The structure of uterine rhabdomyosarcoma is very complex. The transversely striated muscle cells are very few and form only a small portion of the tumor. The term rhabdomyosarcoma is used simply to indicate the presence of a very characteristic type of cell. In addition to muscle cells in various stages of development there are also present small spindle and small round cells, which sometimes form a stroma for the larger muscle cells. Other elements frequently found are: multinucleated cells or sarco-blasts, myxomatous tissue, cartilage, and gland tissue. These neoplasms come under the category of mesodermal mixed tumors and probably arise from displacements of embryonic mesodermal tissue from the lumbar region during early fetal life. The persistence of the actual embryonic rounded tissue may give rise to some of the small round cells so frequently present. The glandular elements occurring in some of the cases are possibly derived from the Mullerian ducts. It seems much more prob-

able, however, that they are persisting uterine glands, and they may under certain circumstances undergo collateral hyperplasia, or even carcinomatous degeneration. Rhabdomyosarcoma of the uterus may occur at any age, the limits recorded being two and one-fourth years and seventy-five years. Hemorrhage and a foul discharge are the chief symptoms of this, as of any other malignant disease of the uterus. The growth is very friable and rapidly breaks down; and is practically always polypoid. When the growth projects into the body of the uterus, hemorrhage is liable to be severe. When it projects into the vagina and arises from the cervix, the growth becomes septic, ulcerates superficially and gives rise to a foul discharge, and in some cases to serious bleeding. Clinically the disease must be distinguished from breaking-down fibromyoma, from carcinoma and pure sarcoma, but correct diagnosis is only possible after histological examination. Rhabdomyosarcoma of the uterus appears to rival chorion-epithelioma in its malignancy, rapid growth and in the speed with which it leads to a fatal issue. In the recorded cases there appear to have been fourteen deaths within a few months of the first symptoms. The longest period of time any of these cases survived was one year after operation and two and one-half years after the first symptoms. A few of these deaths, however, appear to have occurred as the result of operative procedures.

Smallpox in Infants and Children.—

Hanua (British Journal of Children's Diseases) says that cases of smallpox in children under fifteen years of age, taken from the smallpox records of the Liverpool hospitals during the past ten years reveals the fact that among the well vaccinated no cases are to be found under two years, and only seven cases between two and five years of age. The immunity conferred by vaccination in infancy gradually diminishes but still affords partial protection. Between two and five years all, or 100 per cent., are very mild cases, between five and ten years over 90 per cent are very mild, and between ten and fifteen years over 80 per cent. are in the same category. No severe cases are to be found: The concurrent vaccination performed on a susceptible infant, if it does not entirely prevent, as it will do it performed within one or two days of the day of infection with small pox is found, of modify the disease in the following directions. The papules may be very few and limited to isolated parts of the body; they pass, however, through the typical course of evolution; in addition to the limitation of papules the eruption itself is frequently

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modified, the lesions being superficially placed and maturing rapidly, the crusts rapidly inspissating and dropping off. It is found that this concurrent vaccination, if done within the first three days of infection, has the effect of almost entirely neutralizing the smallpox so that no symptoms or signs of the disease appear, or the attack will be very mild, such as the appearance of a few papules which may never become vesicles, but simply die away.

Nervous Complications of Varicella.

—Miller and Davidson (Brit. Jour. Child. Dis.) report the following case: A boy, aged two and one-half years, developed a mild attack of varicella. The rash was moderate in amount and the constitutional symptoms were not severe, the temperature not exceeding 100° F. Nothing unusual was noticed until the morning of the fifth day, when after a normal night the child was found to be unable to stand, or to talk distinctly, and to show a tremor of the limbs, head and tongue. The onset of these symptoms was not associated with any fresh rash or rise of temperature. The tremor of the tongue quickly passed off, but when the child was seen four days later the tremor was very marked in the limbs. It was a slow rhythmic movement, which prevented him from standing without support. The

movements of the limbs, particularly of the arms, were slow and stiff. There was no loss of emotional expression but the child was irritable and emotional. The cranial nerves and reflexes were normal. In a few days the tremor gradually diminished until it became only noticeable during excitement, and at the end of a month from the time of onset it had practically disappeared altogether. Since then the boy is thought to be a little more excitable than previously. The literature contains reports of one very similar case; one case of encephalitis affecting the oculomotor nuclei; one of infantile hemiplegia complicating varicella; two cases recorded as polioencephalitis but possibly meningismus; and one, reported as a case of sclerose en plaques but possibly cerebellar encephalitis. The writer also reviews the literature of other nervous complications of varicella.

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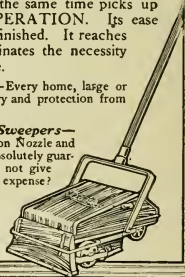
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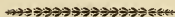
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SOUTHERN MEDICAL SOCIETIES



MISSISSIPPI VALLEY MED. ASSOCIATION.

Annual Meeting at Cincinnati, Ohio.
October, 1914.

Henry Enos Tuley, M. D., Sec'y.,
705 S. Third St., Louisville, Ky.

D'Orsay Hecht, M. D. Pres. Chicago, Ill.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Annual Meeting place, and date, to be
announced later.

W. D. Haggard, M. D., Sec.,
Nashville, Tenn.

John Young Brown, Pres.,
St. Louis, Mo.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Lexington, Ky.
Nov., 18-19-20, 1913.

Seale Harris, M. D., Sec., Mobile, Ala.

Stuart McGuire, M. D., Pres. Richmond, Va.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting Feb. 1915.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Edw'd C. Register, M. D., Pres.
Charlotte, N. C.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Montgomery Ala. April
16th, 1914.

J. N. Baker, M. D., Sec., Montgomery Ala.

R. S. Hill, M. D., Pres, Montgomery, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting, place and date to be
announced later.

F. H. Clark, M. D., Sec., El Reno, Okla.

W. T. Wootton, M. D., Pres.,
Hot Springs, Ark.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Olando, Florida,
May, 13, 1914.

J. D. Fernandez, M. D., Sec.,
Jacksonville, Fla.

P. C. Perry, M. D., Pres.
Jacksonville, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Atlanta, Ga.,
April 15-17, 1914.

W. C. Lyle, M. D., Sec. Augusta, Ga.
Ralston Lattimore, M. D., Pres.,
Savannah, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Newport, Ky.,
(Date not yet decided,) 1914.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

W. O. Roberts, M. D., Pres.
Louisville, Ky.

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at New Orleans, La.
April, 1914.

L. R. DeBuys, M. D., Sec.,
141 Elk Place, New Orleans, La.

Ered J. Mayer, M. D., Pres. New
Opelousas, La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Columbus, Miss.
April, 14 1914.

E. F. Howard, M. D., Sec.,
Vicksburg, Miss.

L. C. Feemster, M. D., Pres., Nettleton, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Raleigh, N. C.
June, 16, 1914.

James M. Parrott, M. D., Pres.
Kinston, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
(date not yet decided) 1914.

Dr. R. E. McBride, M. D. Las Cruces N.M.
Secretary.

H. B. Kauffman, Pres. Albuquerque, N.M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Florence, S. C.,
April, 14-16, 1914.

Edgar A. Hines, M. D., Sec., Seneca, S. C.

W. M. Weston, M. D., Pres.,
Columbia, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Memphis, Tenn.,
April 7-9, 1914.

Perry Bromberg, M. D., Sec.,
315 Jackson Bldg., Nashville, Tenn
W. D. Haggard, M. D., Pres. Nashville, Tenn.

MEDICAL SOCIETY OF VIRGINIA

Annual Meeting at Washington, D. C.
Oct, 27-30 1914.

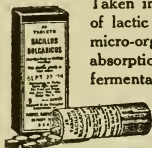
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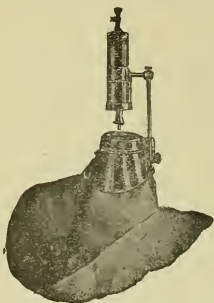
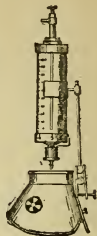
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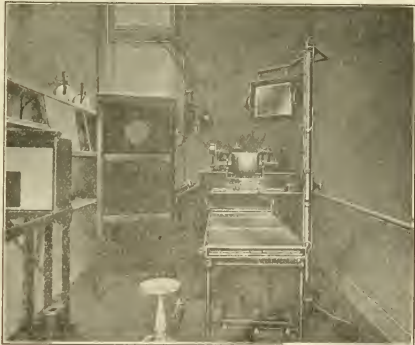
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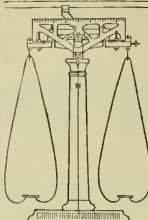
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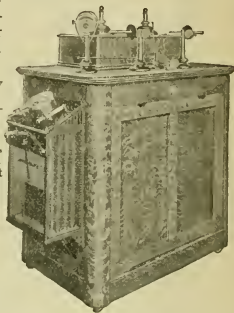
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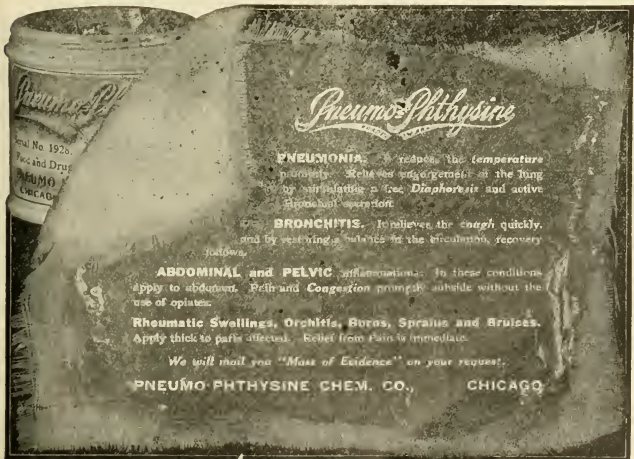
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The Charlotte Medical Journal

VOL. LXX

CHARLOTTE, N. C., AUGUST, 1914.

No. 2.

Closure of the Incision in Tiers With Three Removable Cables.*

By E. T. Dickinson, M. D., Wilson, N. C.

The process is practically a stringing of the tissues of either side of the incision onto a tight cable. This may be done in several different ways according to the indications of the individual case or the desire of the operator. One or more of the tiers may be closed by this method after the others have been closed by any other method.

In abdominal section the peritoneum, fascia and skin are closed with one cable to each tier. Any strong suture material may be used. Silkwormgut of extra size is very satisfactory.

One running stitch of strong silkwormgut on a medium sized needle is entered

wound and close the peritoneal opening. The needle then penetrates the tissues to a point in the skin about one half inch from the end of the skin incision opposite the beginning. When pulled upon this should

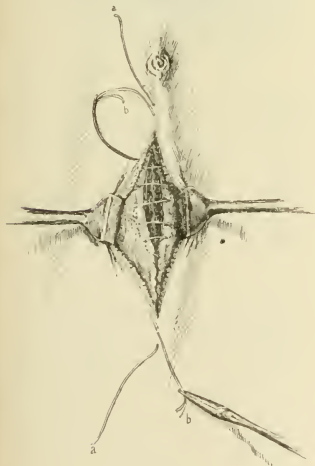


Fig. 1.

through the skin about one half inch from one end of the incision and made to penetrate the tissues to the corresponding end of the incision in the peritoneum. A basting stitch is inserted so as to turn the raw edges of the peritoneum upward into the



Fig. 2.

slip easily in either direction, and as long as the cable is held taut the approximation of the peritoneum is perfect. Approximation may be maintained by only slight tension while the remaining sutures are being placed.

The fascia is closed in the same way except the needle enters and emerges a little nearer the incision than in the first suture, and the fascia is picked up on each side of the incision in the same manner as a running Lambert suture so as to turn the edges down towards the raw edges of the peritoneum which was turned up.

For the closure of the skin incision the needle enters still nearer the incision and a sort of hap-haz-ard long grasp subcutaneous stitch is placed, care being taken to have the needle enter and emerge through the lower edge of the true skin and to sweep well out laterally into the subcutaneous tissues. Near each extremity the grasp

*Read before recent meeting of North Carolina Medical Society.

is not so long as at the middle of the incision. Tension on this suture will draw the margins of the skin only roughly together. But the epithelial edges will be accurately approximated if, while the su-

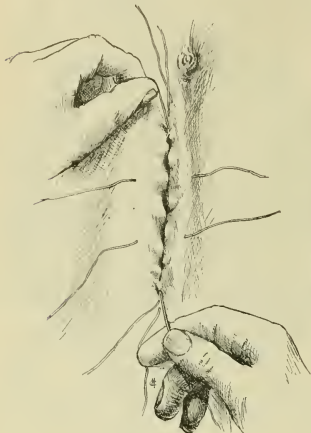


Fig. 3.

ture is held taut, a smooth board is pressed down upon the incision. This board may consist of glass so that any slight crumple may be seen and adjustment made with probe or other instrument at hand.

When all the sutures have been placed they are brought up over the ends of the board, which is a little longer than the distance between the points of entrance and exist of the first suture, and their opposite ends tied to each other or fastened in some way that will maintain proper tension and approximation.

One or more figure-of-eight removable stitched transverse to the incision securing the margins of the fascia at various points and tied transversely over the board serve to completely fix the board and give the final dressing a more completed appearance.

A few points of advantage are:

1. It coaptates all the tissues perfectly by exerting pressure vertically, doing away with dead spaces and discouraging cozing and bloodclot.

2. It gives perfect coaptation of the edges of the tiers by exerting gentle pressure laterally at all points. This is most apprecia-

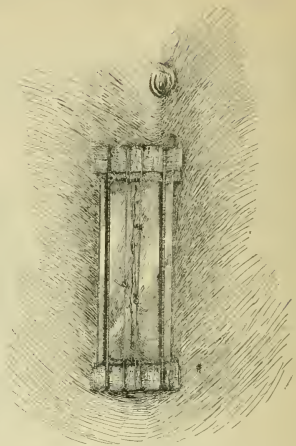


Fig. 4.

ble in the smooth coaptation of the epithelial edges.

3. It is rapidly and easily placed, with little traumatism by the needle and with no penetration through the epithelial surface of the skin.

4. All suture material of the wound may be removed at any time, leaving nothing of questionable nature to irritate or infect after the purpose of the stitch has been subserved.

A Reconsideration of the Anatomy of the Stomach as Regards Pyloric Ulcer.*

By G. H. Macon, M. D., Warrenton, N. C.

The pyloric end of the stomach is much smaller than the fundus, and it is in relation with the wall of the abdomen and under surface of the liver. This relation is changed when the organ is distended. There are two bends near the pyloric end of the stomach. The distal bend is where the pyloric valve is situated, and between them is a bulging called the antrum-pylori.

The pyloric glands are numerous at the pyloric end of the stomach and secrete a serous substance. The pneumogastric and sympathetic nerves supply this part of the stomach.

The blood is through the coeliac axis

Read before recent meeting of North Carolina Medical Society.

which gives off the hepatic and this in turn sends out the pyloric and gastroduodenal direct to the pyloric end of the stomach.

The small intestines beyond the common duct are supplied by the superior mesenteries.

The pylorus and duodenum are in the shape of an S transversally. We know that accumulation occurs at this point because at post mortems this part of the pylorus is stained with bile and is much more dilated than other parts of the intestines.

This S arrangement in a measure prevents the regurgitation of food from the small intestines into the stomach.

In some instances we find cases who vomit large quantities of gases and fluid; this is due to an inadequate condition of the pyloric sphincter which is supposed to act as a partition.

The pyloric is suspended from the liver by the gastro hepatic omentum; and on account of this relation the pylorus and proximal duodenum are freely movable.

Ulcers of the pyloric region are found more frequently in the part distal to the pyloric sphincter than on the proximal side of the sphincter. The anatomic reason is, because the fundus is the highest point of the pyloric section, also because the blood supply is not as abundant as in other parts of the stomach; therefore, the first two inches of the duodenal portion of the pyloric is the most common seat for ulcer.

The first two inches of the duodenal portion of the pylorus is supplied by the supraduodenal is most instances this artery normally should be a branch of the gastroduodenal, but in some cases it is given off direct from the hepatic.

The supra-duodenal anastomoses with other arteries; although it is not as pronounced as is the case with most arteries, and in many cases this artery does not enter into anastomoses with any other of the surrounding blood vessels, therefore, the first two inches of the duodenal portion of the pylorus is the most common seat for ulcer formation, due to its deficient blood supply.

Another anatomic factor in regard to pyloric ulcer is its sympathetic nerve supply, which is in intimate relation with seventh, eighth, and ninth spinal roots, and for this reason we can account for the tenderness of the overlying surfaced in pyloric ulcer, and the pain which in most cases is referred to the left shoulder blade, but in some instances, as in biliary calculi when the stomach is adherent to the gall bladder, the pain is referred to both the right and left shoulder blade. Pyloric ulcer is also usually found at the junction of the ascending

and descending portion of the proximal duodenum.

It is known that men are more commonly affected with arteriosclerosis than women. On account of this lessened blood supply to the parts due to arteriosclerosis, we commonly find more cases of pyloric ulcer in males than in females.

It is now believed that ulcer on the gastric side of the sphincter really had its origin on the duodenal parts of the sphincter at the fundus, which is the part of the least resistance. In some instances we find ulcers which are continuous across the sphincter on both sides, this being due to the continuity of the lymphatic vessels in the mucous and submucous coats of the stomach and duodenum.

In quite a number of cases gastric ulcer is secondary to such anatomical changes as chronic appendicitis, cholecystitis and the diseases of the pancreas, while in a certain number of cases pyloric ulcer is mainly due to a derangement of innervation.

We usually find more cases of chronic appendicitis and gall stones in women than in men, whereas, on the other hand, pyloric ulcer is more commonly found in men.

We must admit that chronic conditions are found more frequently in females than males.

The superior horizontal portion of the duodenum is called the cap and is separated from the stomach by the pyloric ring. Like the stomach, this first portion of the duodenum may be distorted by ulcer. The signs of perforating ulcer hold for this part of the duodenum as they do for the stomach.

The function of the cap is that of a reservoir. During the early stages of digestion the contents are rapidly withdrawn from the reservoir cap, but as digestion progresses the cap is more completely filled with acid chyme. Spasmodic contraction of the cap is often the result of iliac stasis, a lones kink, or a diseased appendix.

The Conservation of Tissue in Injury of The Extremities.

By B. R. Graham, Wallace, N. C.

The frequency of wounds of the extremities make their care and treatment of peculiar interest to those of us engaged in the general practice of medicine and surgery. The upper extremity is particularly exposed to traumatism, and upon the successful management of these cases depends the rapidity of immediate repair, and frequently the extent of permanent disability of the part.

*Read before recent meeting of North Carolina Medical Society,

The modern surgeon needs no elaborate rules for the performance of operations. He must be guided by a thorough knowledge of anatomy, and of the principles of operative surgery, supplemented by common sense and creative ingenuity. Above everything else, he must be clean.

When we have an accident case before us we must decide what results we wish to accomplish, and proceed in the simplest and most direct manner. Our first responsibility is that of saving the patient's life, and the next is that of restoring as far as possible the usefulness of the injured parts.

The greatest factor in the surgeon's favor in the treatment of wounds of the extremities, and particularly of the hand, is the free blood supply. The integrity of the blood supply is of first importance in determining the question as to what tissue can be saved, and what can not. We should be thoroughly conscientious, and keenly alive to the responsibility of restoring and saving even the smallest part, that can, in any case, with safety be preserved and made useful.

The surgeon is no longer deterred by the fears of gangrene, and septicaemia, which constantly menaced his predecessors, and filled our text-books with complicated descriptions of brilliant methods of amputations. Simple cleanliness, with the rigid observance of the principles of asepsis, have endowed us with the means of preventing these dreaded complications, and of giving to the unfortunate injured the chance at least of saving and restoring an injured limb, which was formerly sacrificed. It matters not if the muscles are torn through; they can be sewed together, tendons united, and nerves either grafted or united. Extensive destruction of the skin can later be restored by grafting. So that practically everything that is required for the conservation of an injured limb is a requisite blood supply. Blood vessels frequently remain intact, when everything else is apparently destroyed. Amputation should not be done because the bones are fractured or comminuted. Frequently fractures with open wounds and badly comminuted bones will unite under favorable conditions.

The most conservative of us are frequently in doubt as to the possibility of saving injured limbs. This doubt should, however, be on account of uncertainty regarding the blood supply. Insufficient circulation gives anxiety on account of the possibility of traumatic gangrene. It is under circumstances of this nature that antiseptics play their most important role. We can thoroughly cleanse the wound with strong germicides, cover with steril dressings, and

keep it constantly bathed in warm saline solution, and await developments. We should not amputate until the local circulation has ceased.

These injuries usually come to us badly infected with dirt and grease, and various materials applied to control hemorrhage. The rapidity of repair and the permanent usefulness of the parts depend upon the judgment exercised in repairing the injury, and the care and skill with which we have observed the principles of asepsis. In dressing these wounds we should remove any badly crushed and hanging fragments of tissue, and where limbs have been crushed off, remove sufficient bone of secure adequate covering for the bone, and the wound closed with, or without drainage, depending upon size. We should, however, never amputate where the integrity of the blood supply is sufficient to maintain the vitality of the injured limb.

The dressings may be either wet or dry. Where we are confident of having a clean wound a dry dressing is to be preferred, consisting of a pad of sterile gauze of sufficient size and thickness, and held in position by either adhesive strips or bandage. In case of infected, suppurating, and granulating wounds we find the moist dressing far more satisfactory and efficacious. A pad of sterile gauze covers the wound, and it is kept constantly wet by applying every hour or two a small quantity of some antiseptic solution, as a 2 per cent solution of boric acid, or bichloride of mercury 1-5,000, or any other of the various combinations to suit the surgeon's fancy and individual opinion. It is far better to wet the dressings more frequently than to cover the parts with rubber tissue or oil silk to prevent evaporation, which macerates the skin unnecessarily.

Let us remember that the first dressing is the most important dressing given these injuries. And, above everything else, let us be clean in our technique, and conscientious in the amount of issue we sacrifice, as these are the determining factors in the rapidity of repair and extent of permanent disability.

Sanitary Instruction of School Children.

By B. W. Page, A. B., M. D., Health Officer, Robeson County, Lumberton, N. C.

The importance of sanitation is being recognized and the medical man has placed upon his shoulders the burden of being the pioneer in this field. With foresight and courage he has borne the responsibility,

*Read at recent meeting of North Carolina Medical Society.

made the sacrifices, and led the van. He has raised his own standards and fitted himself for more exacting service without hope of reward, except in the consciousness of duty well done.

A wonderful change has taken place in the last quarter of a century to which all former ages so abundantly contributed. Scientific discoveries have dealt mortal blows to the doctrine of spontaneous generation. Already the specific germs of the most dread diseases have been discovered. Out of the recorded experience and observation of those who had wrought before has been assembled a working hypothesis which is being put to the test. Disease is preventable, and prevention is better than cure.

The medical profession now agrees that the information is sufficient. The charges are more than proven. What was belief is now certainty. The accumulation of evidence can only increase the quantity without altering the quality. The other problems relate to its application.

Since sanitary authority does not extend to the rural districts, which compose four-fifths of North Carolina's population, the burden of sanitation must be placed on the shoulders of the general public. The great problem in sanitation then, is that of education. A movement of this kind must appeal to the intelligence of the people. It must awaken the public conscience, as Sir Francis Galton said, like a new religion. It must allay the prejudice and overcome long established customs. This cannot be accomplished in a day. It will take years to educate the public in the higher ideals.

For decades the public has seemingly refused to believe in this "Monster of Iniquity," and the lower strata of officialdom has joined hands with it, while the higher officials have considered it out of their domain. In all this the few physicians have waged the battle and the general public has looked on but has not seen.

The aroused public interest and the broader intelligence of the present make this an opportune time for the dissemination of the information collected by the medical profession. If once the real public, not the official public, can be reached and interested, the success will be at hand.

One of the most effective ways to use the material at our command in such a manner as not to arouse prejudice, and at the same time appeal to the common sense of the people is through the schools.

In the sanitary instruction of school children, the health officer's success depends largely upon his ability to secure the co-operation of the teachers. He should endeavor to make the teacher an assistant

health officer in every community. To prepare them for this work, they must be instructed by him at the teachers' institutes and teachers' meetings. They must be led to see that the success of their school is largely dependent upon the health of the community. They must be educated to see that the great majority of dull pupils result from some physical defect or disease, and that through their influence and that of the health officer a large per cent. of them can be removed and the school work improved. They must see that contagious and infectious diseases are largely due to ignorance and carelessness, and that education is essential to their eradication. All teachers readily agree that education is a preparation for complete living, and that sanitation is an essential part.

Other factors which influence teachers to co-operate in this humanitarian movement are, first, the State Law, which requires that sanitation shall be taught in the public schools. Second, the county superintendent of schools, who has a very great influence over the teachers of a county. Third, through the press, or from some lecture the citizen becomes interested in the community's health, and insists more and more on sanitary instruction of his children, as he understands its significance and importance. As leaders in the better tendencies of humanity, and in most of our altruistic activities, teachers realize that they have a rare opportunity to aid in the promotion of health work. Sanitary instruction represents the desire of the people to avoid disease, to live useful, wholesome lives, to protect themselves, their children and their families. It represents not only the self interest of the individuals, but their altruism as well. It represents one of the finest products of our civilization, the realization that health is the right of every man, and that the preservation of one's own health and that of his neighbor is a moral duty. It is the result of knowledge that disease is not a necessary evil sent by a chastizing God, but is caused either by living things we call germs, which we get by direct contact with the sick or by improper living.

The public school is the primary, all-important focus for the dissemination of health instruction. The child is at the plastic age when any form of instruction makes an impression, either good or bad, that is lasting and permanent. The interested teacher will readjust the school curricula so as to lay more stress on the essentials of human life and health. It is more important to educate future men and women in sanitation than to make mental gymnasts. The school supplemented by the home must be the fountain head of health knowledge.

The home, unfortunately, owing to the inefficiency of the school in the past, still lacks parents competent to instruct their progeny. The children of to-day and the future should have training in hygiene and life conservation^u to enable them later, as parents, to instruct their own children. But, unlike other studies, sanitation can be simplified. Through the children and through the various activities of a health officer, the entire population of a county can be influenced within a few years.

It is necessary that we correct some erroneous ideas that have existed in the minds of the public for ages. One of the most important factors in sanitation is the public education as to contact infection. Since there is no such thing as spontaneous generation, every contagious and infectious disease must come from a pre-existing and similar disease. The theory of aerial convection of diseases must be eliminated from their minds, and the fact that all contagious and infectious diseases are transmitted by direct or indirect contact substituted in its place. So long as people believed that these diseases are spread broadcast through the air, just so long will it be difficult, if not impossible, for us to make much progress in our fight against their spread.

In Robeson County, only forty-five per cent of the population is white, and fifty-five per cent. negroes and Indians. Among the negroes and Indians the death rate was, when health work began, more than two years ago, like that for the vital statistics area of the United States, nearly twice as high as among the whites. One great cause of the high mortality rate among the negroes is their habit of visiting those sick with contagious diseases. This applies especially to tuberculosis. It seems to me that contact infection in this way is almost as detrimental to their health as their insanitary conditions around the homes.

Public Health Work in North Carolina.

By G. M. Cooper, M. D., Clinton, N. C.

In the selection of a subject as you may note, I have given myself wide latitude. I have not undertaken to produce a literary masterpiece. But I wish to discuss in a candid and simple manner some of the very important public health problems now paramount in our State.

A few years ago the famous botanist, Dr. Asa Gray, was in Asheville and, in company with Dr. Westray Battle and other friends, drove up one of the mountain peaks

near the city. When the carriage was half way to the top, Dr. Gray had the driver stop and he got out and made the statement there by that mountain roadside that there were more different varieties of floral life from that point to the top of Sunset Mountain than could be found on the whole continent of Europe. He stated further that "Every shrub growing in earth's five zones" could be made at home in North Carolina. No state in the Union has a greater variety of soil. We have only begun to scratch the surface of our great resources in agriculture and manufacturing, and the possibilities are unlimited.

With all our wealth and opportunities for a great future we have our problems. With the possible exception of Mississippi we have a larger percentage of rural population—more than 80—than any other State. We are going to find that when we get our vital statistics registrars to report accurately all deaths, that our rural death rate from preventable diseases—preventable, mind you—is going to be very high. This is due to many things, but chiefly to indifference and carelessness. You can change the politics and religion of a family much easier than you can bring about a change in their habits and customs of living.

As mentioned above, with more than eighty per cent of our entire population a rural one the greater part of our public health policy must deal with questions of a rural nature. Sanitarians all over the world have demonstrated beyond a doubt that it is much easier to deal with the preventable disease question of cities or urban communities than it is in the country. Again, we have another element of trouble for the public health worker in our large negro population; the great bulk of whom have absolutely no comprehension whatever of the meaning of hygiene and sanitation. Their standard of living is low, their surroundings nearly always bad, and consequently they are a constant source of anxiety to the health officer. We have to deal with vice and superstition among the negroes; poverty, ignorance and indifference in a great portion of the tenant white class; and carelessness and selfishness on the part of many well-to-do people. So we see that for some time to come our work must continue to be of more importance from an educational standpoint than any other. The place to deliver our most telling blows is in the schools. We must instil into the very bone and marrow of the next generation the importance of a radical change in the living conditions of people who would profit by the findings of science, instead of following the blind paths of pre-

*Read at recent meeting of North Carolina Medical Society.

cedence. In other words they must get the idea inbred that because their fathers died from typhoid fever is no excuse why people should keep on dying from the disease.

The city health officer has more intelligent cooperation—if not more intelligent, sympathetic at least, in the help of the mayor and the police force, and what is of more importance, more money to carry on the work. People in the country are, in greater need of sanitary improvements in living conditions, but the task of accomplishment is seemingly almost impossible, and yet it is work that must be done.

In health matters, as in everything else, it is customary to help that community most which is making greater progress in helping itself—"To him that hath shall be given." However just and expedient such a policy may be, it works a hardship on a community which is to ignorant or too poor to help itself. And that a large portion of our population live in rural sections which are backward and inaccessible is a fact no one can deny.

On the other hand, with our makeshift compulsory school law, with the elevation of teaching standards, with better school houses, and with the beginning of medical inspection of school children already instituted and bringing results in several counties, with its attendant discussions of hygiene and sanitation, success will come, gradually, but surely.

The amount of work that has already been done is an achievement in itself.

To my mind there has been three great agencies responsible for our rating in public health work in North Carolina.

First.—The truly great work done by Dr. W. S. Rankin, especially during the first three years of his work as secretary of the State Board of Health. His work in awakening the people of North Carolina through the State Health Bulletin, and otherwise can never be overestimated.

Second.—The splendid campaigns planned and executed by Dr. John A. Ferrell and Dr. C. W. Stiles and their efficient corps of workers has carried an untold influence for good into the remotest regions of the State. Too much credit cannot be given these men for their great work.

Third.—I feel sure that I voice the sentiment of every active physician and health officer in North Carolina when I say that third great help to us all has been the efficient, capable work of Dr. C. A. Shore and the State Laboratory of Hygiene. Personally I cannot say enough in commendation of Dr. Shore's unfailing courtesy and his generous desire to help us over our hard places.

On behalf of my brother county and

municipal health officers I must say that there have been among them many hard and efficient workers. And again, less distinctive, but no less important, in bringing about the changed conditions of health work, has been the almost universal assistance given us by the newspapers of the State.

We have seen during this past year many great advances—to enumerate in part: The whole-time county health work has been established on a firm and lasting basis. Its worth and importance have been demonstrated in enough representative counties of the State to be now an accepted fact.

We have seen the vast machinery of the Vital Statistics Law swing into action, and I do not need to dwell on its importance. With the Bureau of Vital Statistics established and a responsible chief at its head, we will soon have the pleasure of seeing our entire State credited to the National Registration area. The Bureau of County Health has been established and that work is of vast importance to the entire State. The Bureau of Education has continued valuable publicity work. The reorganization of the State Sanatorium for Tuberculosis has been fully accomplished and it means great things to all North Carolina. The beginning of free distribution of prophylactic typhoid vaccine by the State Laboratory of Hygiene in January of this year is one of the most important events in the State's history. The establishment at Salemburg, Sampson County, of the first official effort at community life, by which North Carolina leads the South, marks an epoch in community health work which is destined to revolutionize the work of rural sanitation. I could go on indefinitely, but enough has been said.

Now let us consider something of our needs. Greater opportunities mean greater responsibilities.

If North Carolina, in common with the other States of the South, is to build up and maintain a strong rural life, sweeping changes must take place. More attention must be paid to community effort and less importance attached to individual methods of doing things. One of the things which I have my heart set on for one community in my home county of Sampson, and which can be made applicable to every community in the State that desires to adopt it, is to ask the Legislature to give us legal permission to organize one community. And for convenience, we have adopted the school district as already established. We want to organize with a Board of Councilors, having a president and other necessary officers, corresponding to the Mayor and Commissioners of the small towns. We

want legal authority to do police duty, dispose of petty offenses just as the mayors do, authority to demand sanitary conditions of every citizen residing in the community. In other words, we want to make an effort to give the people of the rural communities who need it worse than any class of people on earth, the opportunity to protect themselves, from the standpoint of health, morals, education and finances, and to develop their resources.

There has been recently established at the University of North Carolina the chair of Applied Economics and Rural Sociology. Well and good. But now let's go on to an actual necessity and establish the chair of Applied Hygiene and Rural Sanitation. Why not? If there is any one thing our rural population need worse than anything else it is Rural Sanitation. Establish that chair at Chapel Hill and go out into the field and get a man to fill it who knows the great need of the country people along these lines, and in a short while you will begin to see definite results. We are already in need of trained health officers, and the need will soon rapidly increase, and a man trained at our own State University will understand our people and be able to meet our own local conditions a thousand times better than one trained at the new Harvard School for Health Officers.

I understand that a start has already been made toward the establishment at Richmond, Virginia, of a department in the Medical School there to teach public health. But the fact that they have gone to Harvard or Cornell for a teacher makes me feel like weeping. You can sooner teach a Pole or Hun from the Colorado coal mines how to cultivate cotton in Robeson County than you can impress on the mind of a Harvard Health Officer that health problems in the rural South are essentially different from those in Boston.

The State of Texas already has its department of Preventive Medicine at the State University. We must not lag.

Doctor Rosenau says that "Progress in every branch of preventive medicine depends most upon the efforts of physicians." And every man here knows that to be a fact. Therefore one of our foremost needs is to get the great body of physicians in North Carolina to support us and help us out in this work if we would achieve permanent success. And approached in the right manner not a physician in the State but will give freely and cheerfully of his time and influence to aid in public health advancement.

We want to see that when the Legislature meets again the appropriation for the State Laboratory of Hygiene is sufficient

to enable Dr. Shore to produce the Pasteur serum, vaccine virus, diphtheria antitoxin, as well as prophylactic typhoid vaccine for the use of every physician and health officer in the State free for all the people, rich and poor.

We need a closer relationship between the State Board of Health and its officers and the various county health interests. It is a delicate matter and full of dangerous possibilities to all concerned for the State Health Officers to undertake to even offer suggestions as to the selection of county health officers and county physicians. And on the other hand the State Board of Health is in position or should be, to know who comes nearer to performing standard service in health work, as compared with State and National requirements. The State Board of Health should stand ready at all times to act in an advisory and helpful capacity. The men who are working as county health officers are doing pioneer work, and there are many difficult problems to be met and solved. Motives are questioned. License is still mistaken for liberty by numbers of people, complaint at increase of taxes is heard, the death rate from preventable diseases is still regarded in many quarters as the dispensation of Providence. And in the solution of all the thousand problems, the State Board of Health should be ever ready with assistance and guidance, ever bearing in mind that it is for the welfare of the whole people.

Together we should evolve a plan of work based on a permanent system by which the great work of county health may go forward without friction. Such a plan can and will be found at this meeting, which will eliminate all causes for jealousies or unfriendly competition. And which will enable every man engaged in county or municipal health work in the State to feel free to consult with the chief of the department at any and all times.

Gentlemen, we are engaged in the greatest work of modern times, the amelioration of suffering and the conservation of human life. Our work is in the quiet places, the laboratory, the schoolroom, with disease charts and the cause and prevention of disease. When we do have to go out on the firing line it is often in the performance of unpleasant tasks, and consequently we are the target for many shafts, some of them poisoned. Our material reward is barely sufficient for the necessities of life. When we give the best of services, it is often years before the very people most benefited realize what has been done for them. But when I think of the hundreds of thousands of children in North Carolina constituting

our most important asset, who may by the application of the broad principles of medical inspection of all school children, improved teaching methods, longer school terms, absolutely no night work for children under sixteen years of age, and modern sanitary environment in the home and school; when I think of the possibilities of such a future citizenship, I am willing to give my own part, my life, for such a cause.

Amebic Dysentery—Its Diagnosis And Surgical Treatment.*

By Dr. F. R. Kenton, Memphis, Tenn.

In making a diagnosis of amebic dysentery it must be differentiated from dysenteries due to causes other than the ameba histolytica and tetragina, the causative factors in this condition. We may have chronic and acute colitis, enteritis, mucus colitis, and summer diarrhoea, as well as other conditions that simulate this disease, and as the ameba histolytica and tetragina are the causative factors, the search, recognition and finding of them in the rectum or stool of the patient prove the diagnosis. Hence the necessity of careful microscopic examination by a competent man before such a diagnosis is made. As there are some eight or ten ameba that have been described as parasitic within the intestinal tract of man and as it has been quite definitely proven that only two of these cause amebic dysentery it can be seen how hard it might be in some cases to make a diagnosis, and as there has been, and is, so many differences of opinion among competent observers and contradictory statements in the different articles, that the result is that there is a great amount of confusion on the subject. Craig states that he is convinced that scores of patients have been treated weeks and even months for amebic dysentery when the only organism present was the entameba coli and again that this same mistake has been frequently made in patients suffering from acute enteritis and that this fact explains the numerous instances of so called amebic dysentery, with rapid and complete recovery, with the exhibition of the long list of remedies ranging from bismuth and injections of cold water on down to the latter so called specific emetin.

To obtain a specimen the patient should be instructed to take a small dose of salts at bed time and report at the office the first thing in the morning, the faeces can then be voided in a warmed vessel which

should be kept warm, or by using a proctoscope, material can be secured directly from the ulcers in the rectum, and in either case transferred to a warm slide and examined on a warm stage so that motility will not be interfered with, as this is an aid to diagnosis. Many observers claim that a diagnosis of the presence of ameba in the faeces should never be made unless the organisms be motile. While this is valuable advice for the novice in this line of work, it is certainly true that by one who has studied these organisms, they can be easily recognized when motionless, provided the faeces has not been kept so long as to have led to degeneration.

However it should be remembered that a differential diagnosis does not rest upon the presence of a single morphological feature, but should only be made after a careful consideration of all morphological data, as well as the life cycle of the organism investigated. To illustrate: Not every large motile ameba without a distinct nucleus is entameba histolytica, but if to these characteristics be added a carefully differentiated and highly refractile ectoplasm, we may rest assured that we are dealing with entameba histolytica and not entameba coli. Bearing in mind that our differential diagnosis must depend upon the presence of several morphological features rather than one, the following may be said to be the chief points in which these species differ from one another, as observed in fresh preparations.

Cytoplasm: The very marked distinction between the ectoplasm and the endoplasm in entameba histolytica and entameba tetragina is one of the most important features differentiating them from entameba coli. This distinction can always be made in the motile organisms and very frequently in the case of entameba histolytica when it is motionless. The ectoplasm and endoplasm in entameba coli can hardly be distinguished even when the organism is moving and never present the glass like appearance observed in the other species.

Nucleus: In entameba coli the nucleus is almost always visible, situated near the center of the organism and containing much chromatin, while it is bounded by a very thick and well defined nuclear membrane. In entameba histolytica the nucleus is generally invisible, and when visible is situated near the periphery of the organism, contains but little chromatin, and has no definite nuclear membrane. In entameba histolytica the nucleus is generally visible, is large, contains much chromatin and has a well defined nuclear membrane. It can be distinguished from the nucleus of the entameba coli by the broad hyaline

*Read before the First District Medical Society of Jonesboro, Ark. April 28, 1914.

area surrounding the centriole and by cyclical changes occurring in the caryosome during reproduction.

Vacuoles and Contained Bodies: In *Entameba histolytica* a vacuole is always present, except in the smallest individuals and generally there is more than one. This species also contains small oval bodies representing the nuclei of the young spores and generally one or more red blood cells in cases where the faeces contain blood. In *Entameba coli* vacuoles are generally absent and more than one of rare occurrence, while the oval bodies and red blood cells are not observed. In *Entameba tetragina* the vacuole is frequently absent, although these bodies are more often present in this species than in *Entameba coli*. This species may also contain red blood cells, when they are present in the faeces.

Motility: In both *Entameba histolytica* and *Entameba tetragina* motility is very marked, the organism progressing quite rapidly in a more or less definite direction. Under the same circumstances *Entameba coli* is very sluggishly motile, while it is almost never seen to progress in a definite direction. This feature alone will serve to distinguish the *coli* from the pathological ameba if the organisms are observed in freshly voided faeces for it will invariably be found that ameba exhibiting marked motility will present morphological features, proving that they belong to the pathological species.

All this is good in untreated cases or where the process is active, but in cases under treatment or in latent stages there may be no movement of the parasites, and after a long course of treatment it would be hard to say when the patient was free from the disease, so in these cases we must depend on stained specimens. The liquid part of the stool, or better still bloody mucus containing as little foreign material as possible, is spread on a slide and fixed either by the wet or dry method. The wet method may in some cases be best as it tends to distort the ameba less, but for all practical work the dry method will suffice. The specimen is allowed to dry on the slide and then is fixed by immersion from two to five minutes in absolute alcohol. There are other methods more complicated, but which yield no better results. Next comes the staining; a number of stains have been recommended. Hastings, Wrights, Delafields' hematoxylon, carbo-fuchsin, methylene blue, or gentian violet, Hastings', Wrights' or hematoxylon give the best results. If the hematoxylon is used the preparation should be left in it over night and washed in water and then in fifty, per cent, seventy per cent ninety per cent and

absolute alcohol, and then mounted in Canada balsam. If too deeply stained they can be decolorized in seventy per cent alcohol containing a few drops of H. Cl., when proper decolorization has taken place it is placed in a solution of one drop of ammonia to 100 cc. of seventy per cent alcohol until the color turns blue, and then rinsed in seventy per cent alcohol and mounted.

Wright's stain is the most convenient and is used much the same as in blood work. A few drops of the solution is added to a slide and let stand for five minutes and then enough distilled water added until a thin metallic skum forms on the surface. This is allowed to stand for from ten minutes to one hour and then washed off in running water. If stained too deeply, wash in alcohol and xylol. If it is desired to keep specimen, mount in balsame.

In well stained specimens by the latter method the three species may be distinguished by the staining of the ecto and endoplasm. In *Entameba coli* the ectoplasm takes a very delicate blue and appears almost structureless while the endoplasm stains a dark blue or violet, and is composed of deep blue granules and irregular masses of homogeneous material. The distinction between the light blue ectoplasm and the deep blue or violet endoplasm is very marked and serves to differentiate this organism from *Entameba histolytica* in which the ectoplasm takes a deep blue and the endoplasm a light blue color. If vacuoles are present they are observed as unstained spherical or oval areas within the endoplasm. The nuclear chromatin takes a bright red or crimson color, and the nuclear membrane stains very deeply and in overstained specimens the nucleus appears entirely red and the contained structures can not be made out. In *Entameba histolytica* the nucleus stains poorly on account of the small amount of chromatin which it contains and appears in well stained specimens as a pale pink or red.

Entameba tetragina does not stain as well as the two latter species, but the cytoplasm stains a well marked blue, while the nucleus being rich in chromatin, stains a ruby red or dark violet color. This species does not show the division of chromatin into delicate fibrils distributed throughout the cytoplasm as does the *Entameba histolytica*.

As regards cultivation of the parasitic ameba of the intestinal tract, there seems to be as much confusion as there is regarding the recognition of species and in treatment. Many authorities have claimed to have cultivated them while others using the same methods have been unable to do so and as long as such divergency of results

obtain it is quite safe to say that nothing has been accomplished along this line.

These results are explained in the following manner: In the Philippines, where observers claim to have cultivated them, almost all drinking water as well as salad vegetables are infected with free living amebae and it naturally follows that such forms are continually passing through the intestinal canal of man and may be obtained upon suitable culture media from the infected faeces. In the North, on the other hand, free living amebae are comparatively rare and it results that attempts to cultivate amebae from the faeces generally result in failure, as the parasitic species do not develop upon the culture media at present in use.

The general symptomatology aside from the frequent stools, I find are not well described in the ordinary text books; cases that come on acutely with fever, pain in intestines and more or less severe tenesmus with the frequent stools are easily recognized. But this disease tends to become chronic with days or even weeks or months of remission of acute symptoms, and some cases may have a very decided constipation and at the same time the stool may be alive with ameba histolytica. The patient may gradually lose flesh and strength, become anemic and sallow, the skin becomes dry and nonelastic, and may be more or less redish and scaly on the back of the hands and exposed surfaces. The patient is dejected and melancholy and feels that life is not worth living. In these cases tenderness can usually be elicited on deep palpation over the course of the colon, and even if constipation is present, will at times pass more or less mucus with the stools which may or may not be blood tinged. Any or all of these symptoms should put the examiner on his guard and cause him to make a microscopic examination of the stool in order to make a proper diagnosis.

Treatment: There is no disease so resistant to treatment and in which a prognosis is so discouraging as amebic dysentery. Every one is familiar with the fact that amebic dysentery reoccurs even after long periods of time and this fact as well as the one of mistaken diagnosis may account for the many so called specifics. In this paper I will only discuss certain surgical measures which will provide a means whereby the necessary after treatment can be given that will cure nearly if not all cases, if seen before the formation of hepatic abscess. And personally I have failed to see a well developed case cured otherwise, even though all of the accepted remedies had been exhibited over periods of time ranging from weeks to months.

The operation I shall describe is that practiced, and I think originated by Dr. John L. Jelks, namely: appendicocectomy. This is much superior in many respects to appendicostomy or cecostomy in this class of cases; and is performed as follows:

The patient after having been given preliminary treatment for from several days to a week to get him in the best possible condition for operative work, is prepared in the usual way for a laparotomy. A right rectus incision is made similar to the Bevan incision for gall bladder work, except that it may extend a little lower down. It is made through the outer third of the muscle, the fibres of which should be split and not cut. Through this incision the gall bladder can be examined and also the liver for abscess formation which is of such frequent occurrence in these cases. Having taken care of whatever is found in the upper part of the abdomen the caecum with the appendix is then brought up into the incision and the meso-appendix ligated and cut the same as in an ordinary appendectomy, care being taken not to cut it too close to the caecum and thus cut off all the blood supply to the base of the appendix. Now a stab wound is made through the anterior abdominal wall at about McBurneys point or just over the place where the appendix in this particular case may lie, this should be about two c. m. in length. The peritoneum being caught up with forceps so it will not retract and so it can be easily found later. Now four interrupted stay sutures of silk are introduced into the serosa of caecum near the base of the appendix and surrounding it, and the loose ends caught in forceps introduced through the stab wound, and by a little traction on these and on the appendix it is brought up through the incision and onto the outside of the abdomen. Now the parietal peritoneum which is held by the forceps is sewn to the peritoneum of the caecum surrounding the base of the appendix by a continuous cat gut suture which should be interrupted once or twice, the stay sutures serving to hold the caecum up against the abdominal wall. One end of each of these is now threaded and brought through the fascia, muscles and skin and tied to the other end, then the muscle, fascia and skin on each side of the appendix are approximated by one or two interrupted sutures of silk worm gut, leaving the appendix plenty of room so it will not become strangulated, or the different structures can be brought together by the tier method. However this takes more time and is not necessary. The appendix should now be covered with hot sponges and the upper incision should be closed by

the tier method, introducing two or three interrupted silk worm stay sutures. In dressing the wound the lower wound should be walled off from the upper one by a sheet of rubber tissue, which is glued to the skin by a drop of two of ether or chloroform, and each have a separate dressing, as it will not be necessary to redress the upper one for from three to six or seven days, and thus any infectious material that might escape from the opened appendix will be unable to infect the wound above. The dressing should be kept warm with a hot water bag, after the patient is returned to bed and after adhesions have formed in from twenty-four to thirty-six hours the lower dressing can be removed and it will be seen that a line of demarcation has formed around the appendix, and it can be amputated without an anesthetic a little beyond the level of the skin. It is usually well at this time to run a fixation suture through the wall of the appendix at its distal end and a small soft rubber catheter can be introduced and tied in place by the fixation suture. This fixation suture may later be of aid in finding the open end of the appendix when the tube is removed to be cleaned. This tube later is replaced with a specially made appendicostomy tube. Irrigation can be begun at once.

We use solutions of formalin, iodine, thymol, coal oil and normal saline and irrigate every day using from two quarts to a gallon or two of the solutions and literally wash the infection out. The patient is put on a diet consisting chiefly of buttermilk and egg whites, as many as forty sometimes being given in twenty-four hours. No sugars or starches are given and it is wonderful how rapidly these patients improve and take on weight. The fistula should be kept open by keeping the appendicostomy tube in situ for six months at least after all symptoms of the disease have disappeared. When it is decided beyond reasonable doubt that the disease is eradicated the tube can be removed and left out and the fistula will close in a few weeks time. I have seen one or two of these fistulous openings at a later operation and there were no adhesions. The parietal and caecal peritoneum forming a tube about twelve m.m. long and a little larger in diameter than a normal appendix, between the caecum and the anterior belly wall.

As can be seen this operation has the following advantages over those described in the text books:

The upper opening allows examination for and treatment of liver abscess, if present, which is of vital importance. It allows a thorough inspection of the terminal ileum, caecum and ascending colon,

and if any pathological condition is present here, such as a Lanes' kink, a Jackson's membrane, an ileo-pelvic band or inflammatory adhesions they can be remedied, and by being able to make the attachment of the caecum and appendix to the anterior abdominal wall just over the spot where they may lie in this particular case, prevent post-operative tugging and pain at this point when the caecum is loaded. The faecal fistula has in all cases closed in a few weeks time when the tube has been left out, where under the other methods it usually requires an operation for its closure.

The Function of the Hospital.*

By C. D. Hill, M. D., Durham, N. C.

In the State of New York there are forty-four varieties of hospitals. In the State of Texas a law was recently passed requiring every community of 10,000 people to construct and operate a general hospital.

Every doctor in this hall is connected with, owns, expects to own, or is trying to sell a hospital. A few years ago an interne had to use diplomacy, persuasion, or trickery to get some patients to the hospital. To-day he has to use an emetic, a capsicum plaster, or the actual cautery to get some of them out of the hospital. This multiplicity of hospitals, is simply a part of the general progress as seen in other lines. Doctors know that they can render better service by the systematic and scientific methods of the hospitals, than by the unorganized and inadequate methods at the home.

With all these changes that have been going on, only one-tenth of the sick go to the hospitals. It is the function of the hospital to render service to the sick within and without its walls, and to conserve the health of the balance of the community. To put this proposition in a more concrete form, we will indicate briefly some of the activities of our hospital, and, incidentally, some of our methods of serving the community.

The Watts Hospital is an endowed institution, contains one hundred beds, arranged in wards and private rooms. It is constructed on the pavilion system, and situated on high, rolling ground overlooking the town of Durham. It is semi-public, in that we treat non-pay and pay patients. For the non-pay patients we have a staff of physicians for the various departments. We have the advantages and disadvantages of the large metropolitan and the small town hospital; of the public and the private

*Read before recent meeting of North Carolina Medical Society.

hospital; of the general and the special hospital; of the open and closed hospital. Now, most of you are doing the same things we are doing, trying to do other things as we are trying to do other things, planning for and dreaming of yet other things, as we are planning for and dreaming of other things. We believe that the sick coming to our hospital deserve something more than a place to be improperly herded and poorly fed. We believed that we can reach many of that other nine tenths of the sick, and show them that they can be cured; and, we believe that the hospital has a function to perform in conserving the health of those who are not sick.

The public expects that same concentration and cooperation in the treatment of the sick and the well, as they see in the industrial world. Happily, doctors have led and not lagged behind in this movement. Our whole hospital system, including doctors, nurses, major and minor employees, apparatus and appliances, natural and acquired advantages, is directed toward these activities. We endeavor to get all these forces working together for the purpose of serving the community. We endeavor to sink individualities into science and scientific methods, for as Mayo says, "The day of individualism in medicine has passed." The doctors make or mar a hospital, and the hospital depends on them to progress along any line.

The hospital offers an opportunity to the doctor to develop all his latent powers, and to work in conjunction with others, all striving after the same ideals. In the hospital, doctors can consult together, work together, gather and compare facts together. We are trying to standardize technical methods, trying to bring all the aids of the laboratory in making diagnoses and carrying out plans and methods of treatments. Our research and experimental departments offer opportunities to improve technique, to try out new operations, to test out theories, to search into causes.

One of our methods of noting facts and making comparisons is in keeping records. Since February 1st we have been using the card system of keeping surgical records, as suggested by the committee at the last meeting of the Congress of Surgeons (Surgery, Gynecology and Obstetrics, January, *914). We are also using similar record cards in the other departments. The main points of this card system are that it has authority for being the standard to be used in hospitals, and that it follows up the case after the patient leaves the hospital. It follows up the patient to see if he is cured, and, if not, why not. These cards show if a certain technique produced more cures

than some other technique. They show if catgut, silk, linen or kangaroo ligatures showed better results in hernia operations. They show if there were an unnecessary number of drainage cases in appendix operations. These cards show what anesthetics were given; if cases developed pneumonia after operations. They show duration of convalescence; they show if Mr. Jones went back to business two weeks quicker than Mr. Smith, after similar operations. (The bookkeeper can see if Mr. Jones did not pay the balance of his bill two weeks quicker than Mr. Smith).

The gynecological cards show difference in results after the conservative and radical operations on the uterine appendages. They show if Mrs. Jackson was cured mentally as well as physically.

The obstetrical cards show if one obstetrician used forceps oftener than some other, and if any complications arose to delay the time of the mother or baby at the hospital. They show if a repaired perineum performed its function at the end of one year.

The medical cards show comparisons in the treatment of typhoid fever; if careful feeding produced quicker cures. They show that cases of chills and fever may be due to pyelitis, to gall stone infection, or to abscesses of the liver.

The pediatric cards show end results in infant feeding.

Without going into further details, these cards give a history of the work of the hospital; they show facts and not theories. One of our methods of following up the card system, to find end results, is to write to the patients (with the consent of their physicians) one year from the date of dismissal from the hospital.

Another way is by sending a nurse to their homes. Especially in medical and pediatric cases do we use the nurse. We make it a part of the nurse's training in district service work. Baby Ruth Johnson remains in the hospital ten days, or until the proper food has been selected to fit her case. After she goes home we send a nurse to see if our directions are carried out. While the nurse is in the home she has a chance to note the surroundings. She has the best chance to instruct the mother and the father in the details of hygiene. She has a chance to show the importance of proper food, properly prepared. The nurse is only practicing what she has learned in our dietetic department. By this method we get definite results. We think this method accomplishes more than tons of pamphlets.

Recently, in some investigations on pellagra, we secured specimens of bread from

pellagra patients. If you had seen and felt some of these specimens, you would realize what a field this is for teaching scientific cooking.

We are using systematic methods of reaching that large class of patients in and outside the hospital who "just feel bad" all the time, who don't know the joy of living. You may call their trouble neurasthenia, hysteria or hypochondria, and if you give it a name they only revel the more in their condition. These cases often tax and baffle the whole hospital system. If they can be taught that health, as well as sickness, is contagious, a great waste of nervous energy will be conserved to the community. Other methods of serving the community we are still trying to solve.

We hope to make the hospital system a team of specialists, and also to render the service of the fast disappearing family doctor.

The Value of Pituitary Extract in Obstetrics.

Seavy Highsmith, M. D., Fayetteville, N. C.

There has been a long-felt need in obstetrical work for some drug or agent that would stimulate a contraction of the longitudinal fibers of the muscles of the uterus without a corresponding contraction of the circular fibers. Such an agent has been presented to the profession in the form of "Pituitary Extract" made from the posterior lobe of the pituitary body. Those who have studied the anatomy and functions of the pituitary body tell us that it is developed partly from the ectoderm of the buccal cavity and partly from that of the neural canal. It is therefore partly epithelial and partly nervous in origin. The anterior and posterior lobes seem to serve different functions. The anterior lobe having to do with the general growth of the body and especially the skeleton. While the posterior lobe serves to promote the contractability and increase the tone of plain muscular tissue generally, as well as of the heart.

It is also claimed, that it increases the activity of certain glands, especially the mammary glands and the kidneys. It is therefore the extract or fluid from the posterior lobe of the pituitary body that is used as an oxytocic in obstetrical practice.

After having promised (Dr. Averitt) our chairman of "The branch of Obstetrics" to write an article on this subject I realized that my experience in the use of pituitary extract has been too limited to add anything of value statistical. With this ap-

ology, and encouraged by the fact that nothing has before been presented to this Society upon this subject, and realizing also that this is an age of animal extract and serumtherapy treatment, I have decided to give my observations and experience with its use.

During the last eighteen months I have used pituitary extract in twenty obstetrical cases with more or less satisfactory results. I have always waited until dilatation of the cervix is well advanced before its administration. My results briefly have been as follows: In seventeen of these cases the pains were remarkably increased, beginning usually about fifteen or twenty minutes after its administration.

January 18, 1914, I was called in consultation with Dr. T. C. Bullock, of Autryville.

Patient, Mrs. T. G.; age thirty-seven; primipara. Slightly contracted pelvis. Had been in labor four days with pains rather slow and light of tone, but sufficient to prevent sleep. The patient at the time I saw her was beginning to show some signs of exhaustion. The pains had almost ceased; dilatation practically completed, head engaged; no descent. We decided to give her 1 c.c. of Pituitrin hypodermically. Dose administered at 10 o'clock a. m. Fifteen minutes later the pains were re-established with good tone and strength, occurring at intervals of every ten minutes. At the end of two hours considerable progress had been made, but pains again flagged. With the second dose of $\frac{1}{2}$ c.c. pains reestablished within twenty minutes and labor was terminated thirty minutes later. Mother and child both living. The puerperal period was uninterrupted except for a painful abscess of the jaw, caused by a bad tooth.

On March 16, 1914, was called in consultation with Dr. W. P. Olive. Patient, mulatto woman, eighteen years old; primipara. Had been in labor for twelve hours. Dilatation was slow and tedious. At the end of twelve hours patient began to show signs of exhaustion and pains smaller and further apart. We decided to give pituitary extract and administered 1 c.c. Pains were re-established with good tone in about fifteen minutes and child was born thirty minutes after its administration. Mother showed evidence of specific infection. Child poorly developed, low vitality. Tips of fingers and arsears on the feet had no skin development. Nails absent. The child was syphilitic and died about half-hour after birth. Mother was put on specific treatment and made satisfactory recovery.

June 1, 1914, was called to see Mrs. W. Pregnant at term, but was suffering with

*Read before the recent meeting of the North Carolina Medical Society.

an acute colitis. There were frequent stools, considerable amount of mucus and some blood. This kept up for two days. On the evening of second day labor began. This patient was twenty-seven years old; primipara. At the time labor set in was somewhat fagged out and pulled down by the two days of distentery. Her pains were frequent and strong, but of short duration. At 11 o'clock same night examination showed that the dilatation of the cervix was well advanced. I then administered 1 c.c. of Pituitary Extract. In fifteen minutes pains increased and the duration of the pains were somewhat lengthened. They kept up at intervals of ten to fifteen minutes during the night with some decent, but progress slow. At nine o'clock the morning following I again administered 1 c.c. of pituitary extract; this again stimulated pains and she continued making some progress. At eleven o'clock, two hours after the last administration, patient began to lose heart. The head had descended, but was not down over the perineum, no progress was being made. I decided it time to give her surgical assistance. Called in Dr. W. S. Jordan, who gave her anæsthetic. I applied forceps and delivered. In this case the pituitary extract was unsuccessful in terminating labor, but I am sure without its use we would have had to apply high forceps, with much more difficulty for us and danger to the mother, than from the comparatively low application we were able to make after it had been given. The child was still born, due to the compression of the cord, which was firmly drawn about its neck cutting off the circulation for a period of twenty minutes during the tedious passage of the head and shoulders over the perineum. The mother made a nice recovery.

It has been suggested that the administration of pituitary extract is liable to kill the fetus by too strong compression from increased uterine contraction.

In none of my cases have I had any complications from its use. Cases have been reported with profuse hemorrhage following its use. In my opinion this was due rather to laceration caused by the increased forces of the pains and the rapid delivery rather than the use of the drug itself. We must bear in mind, however, that we do have an increase of blood pressure, beginning soon after its administration and it therefore should be used with caution, with all patients showing signs of high blood pressure to organic disease of the heart and kidney. I think pituitary extract will prove of great value in obstetrical practice. However, if not used intelligently is capable of doing a vast amount of

harm. Along this line allow me to quote Dr. J. W. Williams in his presidential address delivered before the American Gynecological Society, published in the American Medical Journal, June 6, 1914. He says:

"I might continue to recount many other advances in the practical treatment of childbirth and its complications, but time will not permit. Consequently, I shall refer only to the abuse of ergot. Its employment was considered on several occasions in the early days of the society, when the consensus of opinion developed that it was indicated only after extrusion of the placenta. It may also interest you to be reminded that it was frequently administered so freely in the treatment of abortion as to give rise to chronic ergot poisoning, and that John Goodman reported an instance in which it had led to gangrene of the extremities. I lay stress on this almost forgotten fragment of medical history, for I believe that unless correct teachings concerning the action of Pituitary glands substance soon become current, a similar crusade will be necessary to check the abuse of this powerful therapeutic agent."

In my opinion the physician who rushes to an obstetrical patient and would hastily administer a hypodermic of pituitary extract with no other reason than to shorten his stay at her home, not considering what the outcome might be to the patient would be committing an act no less than criminal. It acts like a wedge driven in a piece of timber. It often causes a "Labor Storm." Its action may be powerful enough to rupture the uterine, It should be given with care to primiparas, and should not be given in many case where labor is progressing normally.

Instead of relieving the suffering of the woman, it intensifies it. The only relief it offers the patient is shortening the duration of the labor period. We must therefore study carefully whether or not and when it is necessary to shorten this duration.

If the patient is progressing with the labor and the pains seem greater than she can bear; and we are called upon to give her relief, it would be far better for the patient and more practical for the physician, to give hypodermically an H. M. C. tablet, or one-fourth grain of morphine sulphate.

If one is inclined to follow the teachings of Kronig and Gauss, in their obstetrical clinic at Frieburg, Germany, he might try the combination of scopolamin and morphine. The drug of the wonderful "Twilight Sleep." Allow me to call your attention to an article in the June number of McClure's magazine, entitled "Painless

Childbirth." The wonderful results at this German clinic has been written up, so as to make the lying in period read like a trip to "Fairy Land."

I would also call your attention to the criticism upon this article in the American Medical Journal, of June 6th, 13th, 1914.

If it is evident that the termination would take place within a few minutes give her chloroform, just enough to make her unconscious of the pain.

If the patient is suffering with Uterine Inertia and progress thus stopped, if dilatation is well advanced and the child's position correct, the pituitary extract will in most cases give pleasing results.

If the labor has been long and tedious, and if there has not been enough decent for the application of forceps, its administration will often enable you to deal with low or medium, rather than high forceps.

Its action is most prompt in the second stage of labor. Its administration is said to be of use in cases of retention of urine, following labor. If given with deep injection in the muscles, when bladder is full it often causes a spontaneous emptying of the bladder. While if the bladder is only half full the action is less marked.

It will sometimes produce premature labor, but is not reliable for that purpose.

The results are unsatisfactory in the first stage of labor, and the undilated cervix but is of marked value during the second stage of labor if properly used.

Postpartum it is also of some value, but I prefer the use of ergot.

115 Green Street.

The Proper Use of the Forceps in Obstetrics.*

By K. G. Averitt, M. D., Cedar Creek, N. C.

Much has been said and written about the use of forceps. Some make frequent use of the instrument, some very rarely use them, and some seem to think they are too dangerous to mother and child to be accorded a place in the obstetrician's armamentarium.

Experience gained at the bedside, the best of all schools, convinces the practical obstetrician that the first class are guilty of meddlesome midwifery, that the second class are guilty of negligence, and that the third class are too narrowminded to deserve even passing notice, because he finds the instrument a very valuable one when properly used and a very dangerous one when improperly used.

It is never justifiable to use the forceps in any case in order to save time to the practitioner, and it is not good practice to use them in cases that nature is conducting safely. On the other hand, their use in cases in which they are indicated should not be neglected till it is too late.

In view of the above facts, the question naturally arises, "What are the indications for the use of forceps and what are the qualifications necessary to enable the physician to properly use them?" In a general way it has been said that inability of the mother's expulsive forces to overcome the obstacles to delivery is one of the most frequent indications. This is true, provided that we cannot reinforce her expulsive forces by better means. Formerly it was a very difficult matter to increase the force of the pains. Many drugs have been recommended to increase the force of the pains, but with the exception of quinine, very little can be expected from them, and this drug is so uncertain and unpleasant in its effects, that we cannot depend on it. Recently, however, Pituitrin has been brought forward, as a reliable remedy to increase the expulsive forces, and clinical experience convinces us that is a very valuable agent for the purpose. Many cases of uterine inertia occurring in multipara, in which the forceps were formerly used, can now be safely treated with this agent, provided the cervix is fully dilated and the diameters of the pelvis are normal. It should never be used before the cervix is fully dilated and should not be used in primipara. The forceps are to be preferred in all cases occurring in the latter in which it is necessary to render aid to the mother.

The forceps are also indicated in cases which require that delivery should be accomplished rapidly, either in the interest of the mother or child, provided, for other reasons, they are not contraindicated. Under this head may be mentioned certain cases of accidental hemorrhage, prolapsus funis, rupture of the uterus, and of eclampsia, or in cases of placenta prævia to hold the head down in order to make it act as a tampon.

Forceps should not be applied to a hydrocephalic head or a decomposing foetus, because the instrument will almost certainly fail to hold and will very probably do the mother much harm.

Forceps should not be used until the os is dilated. There are exceptions to this rule. When the maternal or foetal life is threatened, the instrument may be used through an os not fully dilated, but such conditions are rare, and as we increase in obstetrical knowledge they become more and more

*Read before the recent meeting of the North Carolina Medical Society.

rare. The forceps should not be used in any case where the diameters of the pelvic canal are so much below the normal measurement that we know there is very little if any probability of delivering a living child. To drag a child through a pelvis that is so much contracted that it is impossible to deliver a living child is, in my opinion, little short of criminal in this age of surgical enlightenment. A Cæsarean section, a symphysiotomy, or a pubiotomy should be done in all such cases. The only reasonable excuse for such cases at the present day, is isolated cases occurring far from a hospital, and in places where it is impossible to secure competent help. These cases only occur in the practice of men like myself, whose practice is confined to the rural districts and even in these cases we can generally remove the patient to a hospital, or get competent assistance if we put forth the proper effort. There is certainly no excuse for the use of forceps in such cases occurring in towns where hospitals and competent assistance are always to be found. Forceps should not be used until the head has engaged in the superior strait, unless it be in cases of placenta prævia with the head presenting, and even in this complication other methods of delivery are usually preferable.

In cases of face presentation with the chin posterior, it is impossible to use the forceps, and this should always be borne in mind by the beginner, or he will do the woman irreparable harm.

These indications for the use of forceps are the ones most frequently occurring in the practice of the general practitioner; others may occasionally arise, but by carefully observing the above indications, we can form an intelligent idea when to use the instrument.

As for the qualifications necessary to properly use the forceps, almost every man graduating from a medical college, thinks he is competent to use the forceps, but men of riper years know this is a sad mistake. To properly use the forceps the physician must remember that the forceps is designed mainly to reinforce the vis a tergo in labor not to supplant it; he must have a thorough knowledge of the diameters of the pelvis and those of the foetal head; he must thoroughly understand the axes and planes of the pelvis; he must be experienced in listening at the foetal heart sound, because if the sounds should drop to 100 per minute, there is great danger that the child will be born dead and it becomes necessary to deliver rapidly to prevent this unfortunate accident; he must be thoroughly trained in asepsis and anaesthesia; he must know the functions of the forceps, and above all

he must have absolute control of himself.

Most of these qualifications are fully discussed in the text-books, but strange to say the authors give very little space to explaining the functions of the forceps, and all neglect the personal equation when it comes to self-control or keeping cool.

The chief function of the forces is that of a tractor another function is that of a rotator, but this is a dangerous function and in my opinion should not be used by any but an experienced operator; another function sometimes employed to distodge the head from its impacted position is that of a lever, but this is seldom brought into use, and last of all, but most dangerous of all, the forceps may be regarded as a compressor. Of course, some compression is necessary to make the instrument hold and is unavoidable, but the constant aim of the operator should be to reduce the compression to a minimum by using an instrument with a proper cephalic curve and by frequently relaxing his grip on the handles. They never should be used as a compressor per se.

The last and by far the most important qualification in using forceps is to have absolute control of yourself. No man should attempt to use the forceps who cannot control himself. To be able to control yourself requires long and careful training and this training cannot be obtained in low-grade schools with weak faculties and limited clinical material. A school to give the necessary training must have trained and experienced men, and must have abundant clinical material for bedside instruction. A school with such facilities for teaching will do all that a school can do to properly instruct its students and to turn out competent obstetricians, but the man must also do his part while attending the school and after leaving the doors of his Alma Mater. Some men naturally have more control of themselves than others, and are therefore better fitted for the practice of obstetrics, but almost any man with the necessary book knowledge, and good commonsense, can make a reasonably good obstetrician if he will closely apply himself and keep cool. To get excited and brace both feet against the bed, and pull like you were trying to pull a drowning man out of a river is inexcusable. Always remember there is plenty of time to get your thoughts together, then use your knowledge of the mathematics of the child's head and the mother's pelvis and make your traction downward and backward in the axis of the superior strait till the head is beginning to escape under the pubic arch, then begin your extension and carefully watch the perineum to prevent a laceration. Always remember that

the traction should be intermittent, not continuous, so that the child will have a chance to live and the mother to escape injury. In other words we should imitate nature in her management of a case. No woman could live, and no child could be born alive in a labor case lasting several hours if the pains did not intermit, and the same principle applies to the forceps. Also remember when you cease traction to hold the handles of the instrument lightly, or if using one with a screw lock to loosen the lock in order that the brain of the child may receive a supply of blood, and that rotation may not be interfered with.

Used with judgment and a cool brain the forceps will save much suffering, and do no harm, but used in any other manner, they pre exceedingly dangerous and should be left at home.

Artresia of the Vagina of Congenital Variety.*

By J. A. Williams, M. D., Greensboro, N. C.

The case was referred to me by Dr. J. E. Foscue.

Miss M. S.; age 16. Family history: Negative.

Personal History: Was born prematurely, seven months pregnancy. Had the usual diseases of childhood: rubeola, pertussis, mumps, varicella, repeated attacks of tonsilitis, pneumonia at the age of ten, otitis media at age of fifteen with spontaneous recovery.

Menstrual history: Patient had never menstruated, but had been having pains for the past year in the lower abdomen which usually lasted for two or three days at a time and reoccurred each month without indication of any flow. She had never had vicarious menstruation. For the last three months the pain had become more or less continuous, especially severe at night. Three months ago the patient noticed a small mass slightly to the left of the median line of the lower abdomen. This mass she claims was gradually growing in size. Her appetite was poor, she was pale, ænemic and generally debilitated and had lost some in weight.

Upon physical examination she was found to be rather poorly nourished and underdeveloped. Height, 5 ft. 6 in.; weight, 110; hands, arms, head, neck, chest and heart negative. Abdomen, upper half negative, while in the lower half was very tender, but not rigid. A large mass in the median line, inclining toward the left iliac fossa. On palpitation it was mard, mov-

able in either direction and continued into the pelvis behind the symphysis. Percussion over the mass we get a flat note. The lower extremities were negative. The mammae were fairly well developed.

Vaginal examination: The labia majora, labia aminora, clitoris and urinarius meatus normal, but there was no vaginal orifice.

Blood: Hemoglobin, 75%; leucocytes, 10,200; red blood 4,140,000 relative proportion. Temp., 99.2°; pulse, 89; respir., 22.

Diagnosis: Imperforate hymen and distension of uterus with blood. The space between the vestibule and fouchette or anterior perineum was very short.

The patient was put on the operative table, perineal position, an incision was made with a scalpel from the meatus urinarius to the perineum and dissected back for two inches deep. I then found a bulging mass containing fluid. Fearing this might be the bladder I packed this opening and opened the abdomen. Upon opening the abdominal cavity I found the abdominal mass to be the uterus pushed up completely out of the pelvis, extending midway between the umbilicus and symphysis. The omentum very black and studded with clots of coagulated blood, uterus distended and congested. The Fallopian tubes were very much enlarged, congested and leaking from their fimbriated ends into the abdominal cavity with quite a quantity of blood in the cavity. The ovaries also enlarged and congested. The pelvis was completely filled with a large liquid mass. The abdominal incision was covered temporarily with gauge and towel.

The patient was put back in perineal position. The edges of the vaginal incision retracted, the mass was grasped with a pair of Oschner forceps on each side and drawn down to the edge of the vaginal incision, after introducing a sound into the bladder the mass was incised and found to be the vaginal fluid with liquid blood, dark brown and of about two quarts. The edge of this mass was stitched to the edges of the anterior incision all round and a rubber tube inserted into the vagina for drainage. The abdominal incision was then exposed. The left tube was so strictured and adherent to the sigmoid that it was excised. The abdominal drain left in the lower part of the abdominal incision, extending into the pelvis, and the abdomen closed in the usual way. This drain was removed on the sixth day, the vaginal tube on the eighth day and a sterile douche given daily. The temperature on the third day was 100°, then normal till the patient left the hospital. The vaginal wound healed nicely and the

*Read at recent meeting of North Carolina Medical Society.

patient left the hospital on the eighteenth day feeling fine, color good. I understand she has since menstruated naturally and now in almost perfect health.

This Agrees with Berry Hart's theory; That the vagina is formed above by the decent of the ducts of Muller and the lower part of the vagina is derived from the urogenital sinus by breaking down of the Wolffian bulbs or lower end of Wolffian ducts.

The general view has been that the whole vagina is derived from the decent of the two ducts of Muller.

Some Common Errors In Neurological Diagnosis and Treatment, With Two Cases Illustrating Scientific Psychotherapy.

By Tom. A. Williams, MB., CM., Edin., Washington, D. C. Corresp. Member Soccs. of Neurol. and Psychct. of Paris. Neurologist to Epiphany Free Dispensary, etc.

The fundamental error too common in contemporary therapeutics, happily passing away now, is the striking at the symptoms.

It is the groundwork upon which is built the nostrum evil. These compounds make appeal only to physicians versed in nothing but pharmacodynamics. Pathogenesis teaches better. Because one knows how to slow a rapid heart is no reason as to its desirability for the patient's sake. A pained abdomen does not command an opiate (but rather the knife). Is there any more reason why a pained cerebrum should? Stupefaction with sedatives is no better therapeutics in nervous cases than in surgical. The difference between them is that surgical pathology is understood by many men, while neuropathology, and above all psychopathology, is hardly even sensed save by a few.

A few examples of changed practice will make clear the kind of point of view so much required in current practice in order to save the numerous nervous wrecks resulting from the exceedingly bad therapeutics so common now.

TWO COMMON MISTAKES TO BE AVOIDED IN DEALING WITH NERVOUS DISORDERS.

Suggestive therapeutics, which is so much vaunted by some. I consider a *grave neurological error*. Psychotherapy should be a constructive growth built on analysis, and not a mere imposing of behaviour upon the patient willy nilly, through a side tracking of his attention by electricity, hypnosis, joint manipulation or religion. Two instances follow, where the inefficacy of such procedure is shown.

Case I. A prominent business man in

one of the larger southern cities was attacked by the condition which precedes and leads to arterio sclerosis. A specialist ordered certain exercises and a dietary. But the real estate man adopted Christian Science. He believed himself to be cured, and was obsessed with the idea that "all is God—God is good—all is good." His natural business caution was replaced by an unreasoning and happy-go-lucky optimism. Result—ruin and suicide in four months.

Another serious *neurological error* is the sending of a patient to a *sanatorium* for nervous diseases without knowing the class of treatment to be given. A proper diagnosis should first be made; for this will often obviate any such procedure as sending the patient to an institution and the stigma it involves. Besides, it is the man behind the gun who counts after all.

Case 2. *Suicide prevented*. Longing to put an end to his life, having tried to drown himself and having taken laudanum, a farmer's son, aged 24, was sent to a sanatorium. Toward the end of his stay, of 7 weeks, he crushed and swallowed an electric light globe. So he was removed, and immediately drank laudanum again. He was then brought to Dr. Hooe in Washington, who placed him in a general hospital and called a Neurologist, who at once began to analyse the why of the lad's impulse to kill himself. Less than two hours sufficed to ascertain the cause, which was, in short, that he felt dispirited and hence ill all the time, because of nagging of the family, and others. Too shy to assert himself, he had for a year sunk into solitary dullness, which made him a laughing stock. The result was, that the least correction, or even suggestion about farm work would be taken as an insult. On one occasion for example, a neighbour farmer, who wished him to plant the corn differently, was believed by his Mother, though the patient knew that the neighbour was quite wrong, and he felt all the time that he was disregarded or put upon unjustly. His own sheepish attitude of course encouraged others to treat him in this way. He once left home to escape from this and worked in California, but did not make a success.

Stated shortly, the cause of this attitude towards the surroundings, was his own shame at his erotic fancies and masturbation, which he feared would injure his mind, as other boys had teased him about it. The result was, he became ultra-scrupulous and intolerant of other boys, which led to the solitariness which aggravated his tendencies. He believed now that something was wrong with his brain; but he felt that if he could be cured he would be con-

tented to live.

On this basis, a full explanation was made of the harmlessness of his onanism, and the mechanism of his difficulties was explained and means for their overcoming were outlined. As a result, he went home within two weeks and is now working cheerfully on his Mother's farm, and actually going into society, his family having been instructed how to help him instead of harming as they had formerly done.

Case 3. Cure of chronic fear. A lawyer, 28 years old, gradually withdrew himself from society of friends, later denying himself to all but one. He abandoned work and began to neglect food. At night he would pace the floor for hours. He looked haunted and ashamed. He twice took steps towards suicide. There is no need to enlarge upon a picture so familiar. Suffice it to say he is cured.

He was most distrustful of the possibility of cure as he had 6 months previously visited specialists who had failed to benefit him. As he described it, their procedure seemed to have been somewhat *crude attempt at hypnosis with suggestive assertions* denying his symptoms and their cause, which he had declared to be a state of fear.

It was mainly in the presence of other people that his fear came over him; and he was much ashamed all the time because of this fear. It was quite different from the timidity of adolescence. As a small boy, he was noted for his bravery, and would fight against the boys of the neighbourhood.

The cause of his fear was unknown to him; and he believed it was hereditary, as one of his brothers was worse than himself and had become a wanderer whose whereabouts would be unknown for months at a time. The patient had been fighting against this fear at least since his college days: he had tried playing football to make him courageous, but without effect; and so when he graduated he plunged into a camp of rough lumber men and took his part as a labourer with the rest. Six months of this gave him still greater admiration for courage, but in no wise improved his own. He then returned to civilisation and plunged into his studies and office work, hoping to attenuate the fear which gripped him, but instead of this he gradually lost mastery, and after 6 years of struggle fell into the state in which he came to me.

Genesis. After a physical examination which disclosed no important features except great loss of weight and a high degree of erythema, psychological exploration was begun by my stating to him that either he was, as he believed, a physical degenerate or there was some psychological cause for

his fear, in which latter case the discovery of that cause might lead to the finding of a means for its removal and the ending of his fear. He was then told to search his memory for fear-bearing experiences in early life but could think of none. Then period by period running back from his college days had attention turned upon it; until the patient recollected to have been morbidly fearful at each time until finally he declared that he had always been afraid and must be therefore a physical degenerate. He was then asked what incidents of his early childhood had particularly frightened him, and at first recollected nothing. Wild animals, darkness, fire and people were each in turn presented as possible factors. But it was not until the remembrance of a near relative was recalled that the key of the situation was found. It seemed that this individual's ideal of upbringing was the hardening process and that the theory he held was that every boy's moral welfare required the knowledge of fear. These two objects were combined in such a procedure as throwing the lads into the water while they were unable to swim, to fish them out only when they were going down almost breathless. In winter a favourite method was to throw the boys while asleep in the morning into a bank of snow and snowball them home to the door. Another procedure was to chase the children with a stockwhip from the front door to a tree in the distance. The result of all this was not hardening but a breeding of chronic fear in these two lads. The patient's recollection of these performances reached back to the age of 4. But he had completely put out of his mind these incidents, and indeed failed to take into consideration his cowardice as a young boy, believing it to have originated in the high-school.

Treatment. When the source of the fear was discovered the patient declared that he did not see how this knowledge would benefit him. It was then explained to him that his fear was merely a psychological habit and not an instinctive reaction. He was told that habits can be re-formed if intelligent effort is employed, but that he was in no condition to begin re-formation of habit until he had slept and eaten regularly for some days. When he objected that he had long since given up narcotics, as he was worse than before taking them, he was told that I never found it necessary to give narcotics and that I should induce sleep with-

*"Role of Affectivity and Intellect in Traumatic Hysteria." Williams, in *Journal of Abnormal Psychology*, June, 1910.

out them and that after this he would be less unwilling to eat.

Accordingly, treatment was begun by my visiting him in bed and hypnotising him into sleep. He slept 18 hours, and then carried out the dinner program we had previously arranged. Hypnosis was performed 3 times in all, but not on consecutive nights.

In the meanwhile re-education was begun.

To make a long story short, this consisted merely of a reconstruction of the fear situation of his infancy, and the pointing out of the non-necessity of the fear sequence which had occurred, and the insistence upon the possibility of reconstruction of his reactions towards himself and the world. Numerous instances of the dependence of emotion upon idea were given; and he was instructed concerning reconditioning the reflexes as investigated by Pawlow and Crile, and he was shown the physiological perniciousness of the fear impulse.

He struggled with the situation bravely; but I left him alone after what proved too short a period, namely 4 days, and he lost courage and began to relapse, until a friend drew my attention to the situation after a week. We then resumed relations, as he felt the need of help. After 4 more days of re-education, the tide turned; and he obtained control of his fear.

He celebrated the occasion by an impressionist account of his situation from which I extract what follows:

"I've won! I've licked him! I've driven away the beast that was driving me mad. As soon as I knew just what he was, and why he came, I poked him with my finger, and he busted. He's not gone entirely, he's crouched growling nearby, waiting to jump on me again. And occasionally he gives me a twinge, such as some men get when passing a looking glass. I laugh at it. I'm on my back no longer, I'm fighting—I'm fighting now. And my battle's all but won. I wrote my last letter on Friday. Yesterday I had fun I got up singing in the morning, dressed carefully and went down town. I ate my breakfast slowly, but made the waiter scurry. I roamed the streets. A week ago I slunk into a restaurant, because I was fearfully hungry, unshaven, unshorn, and unkempt, and the waiters all laughed at me, and I hurriedly gobbled my food, and crept trembling out again. I went back there yesterday and bullied the whole crowd. One of them came up grinning, and I looked him in the eye, and the grin changed to a smirk. I kept him standing waiting, while I read the menu through. And I said, 'Bring me this and this and that, and Waitah, hurry!

and don't you dare, to not to do so always.'"

Ten days ago I sneaked up to the Sherman statue, by moonlight, and looked at the statue of a soldier longingly, and wondered how he could be. Yesterday I talked up to him laughing, and wished I could shake his hand."

Reaction. It is over two years now since the above account was written and the patient is now successfully practising his profession, and is still happy, not to say buoyant. At first indeed he was so expansive that I suspected a periodic psychosis in which my intervention was a mere coincidence; but that that is not the case seems to be shown by the gradual subsidence of the extravagant behaviour which the patient at first showed. Besides another instance of still greater disturbance of this kind recently came to my attention wherein no such doubt could arise. It was that of a woman of 28 whose vision was restored by removal of congenital cataract. Dr. Reid Russell of Asheville, the operator, informed me that the patient's reaction was almost maniacal in her joy at her new sensations and at her unaccustomedness to the adaptations they required. So I interpret this young man's extravagance of behaviour to his incapacity at first to adjust himself to the new manner of looking upon the people who surrounded him, his former ever present dread having being displaced by a disregard almost contemptuous, with a consequent effervescence of the ego disconcerting to those who previously knew him.

Interpretation. This case is an instance of:—

(1) An anxiety state induced by mechanism other than that postulated as essential by some psychoanalysts.

(2) The induction of an emotional state directly from an idea.

(3) The forgetting of the initial circumstances which induced the concept which governed the life so detrimentally.

(4) The revelation of the initial circumstances by an analysis so elementary as to be no more than a particularly intelligent armanesis in that it neutralised scepticisms and antagonisms and proceeded with patience.

(5) The failure of (catharsis per se) to alleviate the condition. The hypnosis used was merely incidental to secure sleep upon certain occasions.

(6) The need of re-education that is, psychological reconditioning, for the re-making of the mechanism.

This is a term used by Freud and his followers to denote the disappearance of psychoneurotic symptoms after their cause has been revealed by analysis.

That it is really the re-education implicit

in analysis which removes the symptoms I have tried to shew elsewhere. See Jour. Abnormal Psychology. June 1914.

Readers interested in the Psychoneuroses should consult that journal and various articles of the author such as:

Treatment of Hysteria J. A. M. A. Nov. 1912 also.

Ten Cases of Hysteria Shewing Treatment. Wash. Med. Annals Jan. Post-graduate June 1912.

Management of Juvenile Psychasthenia etc. Amer. Jour. Med. Sci. Nov. 13th 1912. Post Graduate Sep. 1913.

Wash. Med. Annals 1912.

Writers Cramp. New York Med. Jour. Feb. 15th, 1912.

Successful Psychotherapy in Traumatic Neurosis Int. Jour. Surg. 1909.

170 S. N. Street.

Ludwig's Angina.*

By J. T. Burrus, M. D., High Point, N. C.

Because of the severity of the infection associated with the gravest kind of clinical symptoms, and because of the high mortality in this condition, I invite your attention for a few minutes, to the consideration of Ludwig's Angina.

My experience with this disease is limited, only having seen seven cases in fifteen years. Five of this number died. Two recovered. The symptoms as presented were almost uniform. A severe pain in and about the submaxillary gland, radiating to the deep throat muscles, the sternum, the floor of the mouth and base of the tongue. This is preceded by a severe chill, followed by a very high temperature, and a rapid pulse rate, dyspnea and dysphonia, a difficult deglutition. On the second day the symptoms are more severe, with an increased tenderness over the area of infection, which rapidly extends to the deep tissues of the neck. There is locally redness, tenderness, swelling, and great rigidity of the tissues almost board-like in character. The temperature does not continue high after the fourth day to the tenth day, but will drop to almost normal, remaining so for a few hours, and then take a rapid rise to 104 or 105 degrees F. After a few hours again the fever subsides. The toxic symptoms are marked, the patient giving every evidence of a very great toxemia,

The symptoms become more severe until the patient succumbs either to the toxemia or the dyspnea. The bacteriological findings in our cases, as reported by Dr. Hiatt, have shown *Staphylococcus* and *streptococcus*

infection. The differential diagnosis has been from Vincents' Angina and submaxillary Periostritis. In Vincents' Angina symptoms are always associated with an ulcer in the pharynx or posterior fauces, symptoms not so severe, fever not so high, or pulse rate as fast, toxic conditions not so marked, swelling more posterior, mouth can be opened, very little oedema, no hardening of the peri-cellular tissue of the neck, not so much dyspnea, and there is always found the spirilla of Vincent in the oral mucus secretions.

In submaxillary periostitis the onset is more gradual, swelling extends up over superior maxillary bone and the process is external to the dense submaxillary fascia. There is local tenderness confined to the area of infection.

The tissues do not present such hardened appearance, there is very little difficulty in swallowing or breathing, the toxic symptoms less pronounced. There is no bulging of the submental tissue, or protusion of the tongue.

I attribute our high death rate to two things. First, the first five cases were treated effectantly, the real condition was not recognized, and second, the cases that have been referred came in too late to offer any relief owing to the profound toxemia which existed at the time the cases were taken into the hospital. Every one of these cases have given a history of having a tooth extracted previous to the onset.

Would it not be well to advise our dental brothers of the importance of doing his extraction with sterilized instruments? I do not wish to charge a dentist with any neglect along this line, for I am sure they are cognizant of these facts, but we are prone to neglect well known principles and proven facts.

However, I am forced to conclude that every one of my cases were infected by way of the oral mucus membrane, and this infection most probably came from unsterilized tooth-faucers.

Treatment. At once under every antiseptic precaution, make a thorough opening, and drain the neck tissues. If we temporize in this condition, the mortality will be 100 per cent. And on the other hand, if we get the case early and drain thoroughly there would be a low mortality. The cases we have been able to save have been treated in this way, a curved incision along anterior border of sterno cleodore mastoid muscle to theomo-hyoid muscles, thence to the mentum along said muscles, the flap was dissected up and the deeper tissues of the neck drained. In these cases we found the central pus-jacket at the bifurcation of the Carotid artery. A

*Read before the recent meeting of the North Carolina Medical Society.

drain through the trapezino muscle to the back of the neck and posterior to the sterno mastoid muscle. Several anterior drains was also instituted.

Rupture of Kidney From External Violence—Report of a Case—Operation.*

By H. McKee Tucker, M. D., Raleigh, N. C.

Rupture of the kidney is a very infrequent and rare accident, therefore of unusual interest, for which reason I decided to report a case that was referred to me for operation.

The injury is much more frequent in men than women on account of their being more liable to accidents, but even in these it so seldom happens, that the great majority of doctors go through their medical career without ever seeing a case, therefore I shall briefly summarize the more important points of the etiology, pathology, symptomatology and treatment before reporting the case referred to.

Etiology.—Direct blows over the loins, and less often falls and jars are the usual causes of external rupture of the kidney,

Pathology.—Injuries of the kidneys and their coverings vary from a slight tear to a pulpification. The tear may involve the capsule with or without injury to the kidney substance. The more remote the tear is from the pelvis of the kidney, the less the hematuria. The lacerations are more frequently found on the anterior surface of the kidney and may extend in any direction. Numerous tears running to the pelvis of the kidney may completely separate portions of the kidney from each other.

Symptomatology.—The symptoms may be divided into general and local; primary and secondary. Primary general symptoms are similar to those of other injuries exhibiting shock.

The onset of the symptoms of shock may occur soon or not until some hours after the accident.

The primary local symptoms are pain, swelling, tenderness and hematuria; the latter being the most constant. In some cases the urine is slightly smoky, while in others the hemorrhage may be so profuse that the bladder becomes filled with clot, even causing a suppression of urine. In some cases even in extensive tears the hematuria may be slight, on account of the peritoneum being torn and the blood escaping into the abdominal cavity.

The hematuria may disappear in twenty-four hours or persist for three weeks longer.

The secondary local and general symptoms by reason of the infective or reactional processes are due to changes in the renal substance, the peri-renal and connective tissue particularly, producing perinephritis or peritonitis. In the kidney itself subsequent abscess may form or a non-suppurative chronic inflammation may develop.

Treatment.—This should be divided into primary and secondary:

In those cases of slight hematuria, of limited swelling and the absence of the symptoms of general shock, the patient should be put to bed, the part strapped and if necessary anodynes should be given to relieve pain.

It is very doubtful if medicines will diminish the bleeding, not even adrenalin chloride. In order to avoid nephroptosis the patient should be kept in bed for at least three weeks.

In these cases where the shock is severe, and the hemorrhage profuse, an operation should immediately be performed.

Of course it will be impossible to decide just what operation should be done until after the kidney is exposed. When this is done you should, according to the degree of injury, decide to either take the kidney out, or sew up the lacerations.

Nephrectomy should be done when the kidneys is hopelessly destroyed or in case the operation is a late one with much inflammation present.

In those cases where the lines of laceration can be fairly well brought into apposition they should be sutured after tying off the bleeding vessels with cat gut and removing any part that is too much damaged, in such cases doing a partial nephrectomy. In case the ureter is blocked the pelvis of the kidney should be drained:

The following is a brief history of a case referred to me by Dr. Griffin of Clayton, N. C.:

Personal History.—Name, I. W. Harrison; residence, Clayton, N. C.; race, white; age, 30; married.

Past History.—Has had most of the diseases of childhood; some malarial attacks, but none for the past year. Has drank whiskey off and on for most of life.

Present History.—While in an argument and under influence of whiskey was struck over right loin with a baseball bat.

Patient was carried home, suffering much pain. I could not ascertain how much shock was present or when it began, as he did not send for his physician until the next day. At that time his pulse was rapid and weak; his skin was pale; his urine very bloody and he was suffering great pain.

On palpitation he was very tender over

*Read before recent meeting of North Carolina Medical Society.

back and front of kidney. Finally so much blood clotted in his bladder that he was unable to void his urine. Dr. Griffin found it necessary to remove this blood through a catheter by means of the vacuum of a strong hand syringe, as it was impossible to get the urine to flow through a catheter which would always become filled with a clot of blood. His pulse became less rapid but continued weak, and his skin more bleached. A marked hematuria was still present at the end of ten days when he finally consented to come to Rex Hospital; the diagnosis of ruptured kidney having been made by Dr. Arthur Griffin, who referred him to me for operation.

Findings at Operation.—The tissues which were cut through were found to be edematous, and blood had extravasated around the kidney. The kidney when exposed was found to be ruptured longitudinally from above downward for about half its length and below this were two transverse tears. I decided it was best to remove it and did so—leaving a cigarette drain in wound.

August 26th. Two hours after operation, the axillary temperature was 95, pulse 100, resp. 26. August 26th. Highest temperature was 102°, pulse 106°, resp. 22.

August 27th, at 12 o'clock. Temperature 103 1-5, preceded by a slight chill. A pale, sanguinous discharge continuing since operation.

March 28th. Temperature 101 4-5, pulse 106.

March 29th. Temperature 100 3-5 at 10 a. m.; 103 2-5 at 6 p. m., preceded by a chill.

August 30th. Temp. 10 a. m., 100 2-5, pulse 80; 10 p. m., temp 102 1-5, preceded by a chilly sensation.

August 31st 10 a. m. Temp. 99 1-5, pulse 80; 10 p. m., temp. 100, pulse 90.

September 1st, 10 a. m. Temp. 98 3-5, pulse 78; 10 p. m., temp. 100 2-5, pulse 80.

September 2nd, 10 a. m. Temp. 98 2-5, pulse 78; 10 p. m., temp. 99 2-5, pulse 80.

September 3rd, 10 a. m. Temp. 98 3-5, pulse 98; 10 p. m., temp. 104, pulse 108, preceded by a chill.

September 4th, 7 a. m. Temp. 104 2-5, pulse 124 preceded by a chill.

September 5th 6 a. m. Temp. 98, pulse 80; 10 p. m., temp. 98 2-5, pulse 82.

September 6th, 10 a. m. Temp. 98, pulse 80; 8 p. m., temp. 99 4-5, pulse 86.

September 7th, 2 a. m., temp. 102, pulse 106, preceded by a chill; 10 p. m. temp. 100 4-5, pulse 80.

After this the temperature, etc., continued normal until patient was discharged, making in all twelve days of irregular temperature. The points of interest in the convalescence were the temperature and chills, the elevations showing no periodicity

either in days or hours of occurrence and on some days there would be as many as two chills with exacerbations of temperature. Some of the chills were mild and others hard shaking rigors.

The examination of the blood for malaria was negative; however, on the 5th, quinine was given. There was no other chill or rise of temperature after the quinine was begun, except on the 7th.

There was never any pus in the drainage.

Fractured Nasal Bones and Subsequent Diseases.*

By M. R. Gibson, M. D. Raleigh, N. C.

I have selected the subject, "Fractured Nasal Bones and Subsequent Diseases," because it is a subject that should interest every physician; it is the neglected fractures that cause the subsequent diseases, and these are often the first to have sufficient symptoms to attract the attention, with any degree of seriousness, of the patient—the fracture or dislocation having passed unnoticed.

The fact that this primary condition did not seem of sufficient trouble to consult the family physician, or maybe the physician was called and found patient comfortable and he did not consider the injury sufficient to make a thorough examination with speculum, is the cause of a condition that can now be remedied only by doing a major operation, while if more care and immediate attention had been given the patient when he had his accident he would have avoided having to undergo the sad experience of such a operation and would have preserved a much more physiological nose than can possibly be given by doing the subsequent operation or operations as is often the case.

I will mention the anatomical relations of the nasal bones so that we will see at once what these fractures and their complications might mean to our patients.

The nasal bones articulate with each other in middle line, nasal process of frontal bone above, frontal process of maxilla on either side, inferior margin forms superior boundary of anterior nares and gives attachment to the cartilaginous nasal skeleton.

Owing to the close relation of perpendicular plate of ethmoid, cartilaginous septum, superior maxillary, and frontal bones and the relation of these

to the athmoid cells, sphenoid sinus, lacrymol bones, and vomer we at once see that fracture of nasal bones may mean far more than disfigurement of face.

The fractures and their complications are dependent upon the direction from which the blow comes—when from below the septum is often involved without fracture of nasal bones, or may have dislocation of cartilaginous nasal septum and fracture of nasal bones, or simple dislocation of nasal bones and cartilaginous septum. It is the blows from below that produce the simple dislocation of nasal bones without fractures oftener than force from any other direction.

When blow is from in front and with force the nose is flattened and in these cases the nasal bones and septum, both cartilage and perpendicular plate, are involved.

When the blow is from the side we may have a dislocation of nasal bones and fracture of nasal septum or nasal bones may remain intact and septum receive the greatest injury.

The injuries referred to are the most common and the manner in which these usually occur are as stated.

We can readily see, when there is right much swelling, how easily a dislocation of both nasal bones and cartilage can be overlooked unless the nasal speculum and probe are used. The septum may not show at time of injury to be deviated, very much out of line, yet with the slight deformity, which is so often found at juncture of perpendicular plate of ethmoid and cartilage and the low grade of inflammation that will be most certain to follow in cases that are not properly treated, we will find in the course of six months or a year a decided deflected septum, which may be the cause directly or indirectly of any one or more of numerous pathological conditions found in the nose or its accessory sinuses.

From a majority of the patients who come to the nose specialist for treatment and deflected septums found a history of injury to the nose can be gotten from either the patient or his parents.

When we stop and think of the patients we have had complaint of an injury of the nose and we did not make a thorough examination to ascertain if its function was impaired, we are obliged to realize that we have discovered at least one of the causes of so many diseases affecting the respiratory tract.

Asthma may be caused by a condition of the nose brought on by fractured nasal bones or one of its complications. The sphenopalatine ganglion, which is a ganglion on nerve ending of fifth nerve, supplies a large part of the nose, and the fifth and tenth, or vagus nerve, are connected by association fibres, and by irritation of the nose sensations are carried to the thorax and diaphragm through the fifth and then the vagus and asthma in this way brought on.

No case of asthma is properly examined until a most thorough examination of nose is made.

Ethmoiditis may be caused by the encroachment of septum upon turbinates and these upon ethmoid cells, thereby causing irritation and interfering with ventilation and drainage; and the same process may ensue relative to sphenoid sinus and when either of these, posterior ethmoids or sphenoids, become purulent the inflammation may extend to the optic nerve or to other parts of the eye and materially interfere with its function.

It is sufficient to say that in addition to curing conditions mentioned by proper and efficient nasal surgery that pharyngitis, chronic tubal catarrh, sinusitis, are often cured by nasal surgery that will give to the nose all its physiological functions.

I wish at the beginning of my section on treatment to emphasize the importance of early treatment and treatment not with the sole view of giving good cosmetic effects, but of maintaining normal anatomical relations and preserving tissue and thereby restoring to the patient an air passage that possesses the same physiological functions as the normal nose.

First of all, either an anesthetic should be given or a thorough cocaineization done and by the use of nasal speculum for observation, submucous elevator for counter pressure and manual manipulations externally the fracture can be reduced and should there be dislocation, deviation or fracture of septum same should be corrected at this time.

The support which should be used within the nose varies according to the extent of the fracture; there should be a firm pressure made opposite fracture and gauze is sufficient for this purpose. Special attention should be paid the septum and surgeon should be certain that it is left in middle line and should there be submucous hemorrhage a firm

packing against this should be made so that it will become diffused and readily absorbed.

Guttapercha and Burnary's splints make good nasal dressings for the class of cases I am referring to, but they are not accessible to the majority of members of our Society. Adhesive strips are usually sufficient for external correction and especially so if reduction has been made accurately and internal nasal packing has been done properly.

Not only should we correct the acquired nasal obstructions, but congenital deformities and those of childhood should receive immediate attention. The deformities will be found oftener in white children than in those of the negro race, a fact which is due to the more contracted white female pelvis and the frequency with which their delivery is by means of the forceps.

No routine treatment can be given for these cases, but each treated with the view of giving space for breathing and establishing ventilation and drainage and preservation of tissue.

Opiumism—Its Treatment—A Variety of Comments.*

By S. M. Crowell, M. D., Charlotte, N. C.

Narcotic drug users, like the poor of Holy Writ, are constantly and increasingly with us, hence my apology for again taking up the Society's time with this old subject.

"Recently the New York Sun stated that the American nation had outstripped every other in the volume per capita of illegitimate drug using. Within twenty years after taking up the habit, the American nation had almost as many drug habits per capita as China had after having paid homage to King Opium for over two hundred years. It is as ridiculous as sad to contemplate that after all America did to redeemed China from the curse, she has turned squarely around and succeeded China as the greatest market for habit-forming drugs in the world."

"We are now sending our missionaries to China to take the small shoes off the Chinese feet," recently remarked an eminent Bishop of the Southern Methodist Church, and added that, "we would do well to have the Chinese take our women out of strange men's arms in the tango dance." He might have well added, "Come over and help us, China, to rid ourselves of the opium bondage." "In that we did it unto you, so thou do it unto us."

Much confusion has, and still exists as to the true nature of opiumism, especially is this so of its pathology, this feature having

been either erroneously conceived or totally disregarded by most authors. In my opinion, the degree of success or failure attending any effort to cure opiumism is in direct proportion to our comprehension of its pathology.

One class of men write extensively upon the structural pathology as supposedly found in the brain, cord, etc., yet the most powerful microscope has failed to show any changes in these tissues. Another class, in their "desperation," define the pathology as a "Neurosis." Whatever this may mean, in this connection, God only knows. It is very evident that the authors do not. A third class of so-called pathologists classify it as a vice. We may appropriately call them the "Vice-ists"—the pimps—the pseudo-scientists. The Nil-ist, or "Know-Nothing" party, say that the pathology is Nil. This school has written well. Finding nothing, they so tabulate Working upon such erroneous bases, it is not surprising that such men as Da Costa and other eminent men say: "There's no remedy for the opiate habit"—"There's no help for the widow's son." These men evidently have observed at "long range" having made but little, if any, close, personal observations of the subject.

When I took up this special work about a dozen years ago, I got the suggestion from my friend, Dr. Geo. E. Petty, our pioneer investigator along this line, that the pathology was the cardinal point around which revolved success or failure in the treatment of narcotic drug diseases, and working successfully upon this basis for twelve years has convinced me of the correctness of the premise.

What is the pathology of chronic opiumism? It is a functional chronic toxæmia—one of drug, auto and intestinal origin—and practically every symptom following the indiscreet use of the narcotic drug is attributable to drug, auto and intestinal toxæmia, and vice versa, just in proportion to which the toxic state of the system is overcome, all the toxic and nervous manifestations disappear.

With Dr. Petty, the writer believes that if a drug patient could be made cell-clean, that is, if every cell and structure of the body could be entirely freed from toxic matter, there would be no undue nervous manifestations or suffering incident to or following the withdrawal of narcotics from a drug habitue. Of course it is impossible to perfectly cleanse the system of a drug-user so long as any quantity of the drug is taken; however, the closer this state is approximated, the less the suffering incident to or following the withdrawal of the narcotic.

*Read at recent meeting of North Carolina Medical Society.

The pathology as per our hypothesis has not been demonstrated by laboratory methods, yet we have so amply verified it in a clinical way as to justify us in forming the conclusion that we are unquestionably correct.

In opiumism the entire system is impregnated with opium, its by-products, effete material, toxins and ptomains generally as a result of faulty metabolism and defective elimination, and as a consequence the functions of the body cells are semi-paralyzed and so perverted that ultimately there is a state of extreme toxæmia, marked by a well known train of distressing symptoms. The alimentary tract is full; the liver inactive and the portal circulation engorged; the tongue coated, the skin alternately dry and excessively sweaty, swarthy and yellowish, and the heart action irregular and weak. With this toxæmic state, we should have no difficulty in accounting for the perverted activity of every organ in the body, as well as for the various nervous phenomena incident to withdrawal of the drug without proper treatment.

The sentiment and feelings of a toxæmic drug patient was well expressed by the lamented Isaac Erwin Avery in his "Idle Comments," when he said: "If the latter end of morphine and the quitting of morphine did not mean a circumscribed but sure hell, every other person that one met on the streets would have dreamy, unseeing eyes, and that no man ever quits without the ineffable torture of white nights * * * and the grim wearisome struggle over sickened manhood." And the lesser evil, craving, or thirst—do you know what that is? Perhaps you have toiled along in the sunshine without water and then you have thought of a trickling spring under moss-covered rocks. Perhaps you have been so fever-stricken that you thought only of parching and easement. You call this thirst and yet it is only a child's wish compared to that other thing—the devilish thirst that plays with a man and shakes him like a reed in the wind."

As previously stated, the most satisfactory evidence of the correctness of this view of the pathology is to be found in the results of the treatment upon the basis of the pathology as set forth in this paper.

Treatment of Chronic Opiumism—Having to deal with a toxæmia as herein set forth, it is reasonable to suppose that we must relieve this toxæmic state as the primary step in correcting opiumism. This must be accomplished at a time when the system is as little under the influence of the opium as possible in order to avoid its in-

hibitory influence upon the agents of elimination.

The elimination is effected principally in three ways, chiefly, however, through the alimentary tract and to a less degree, through the kidneys and the skin.

Primarily, the elimination is initiated by the administration of a properly-balanced physiologic purgative. This should be given in late afternoon and night so as to get the effect when the system is most free from the narcotic, the last dose of opium being given about 10 p. m. Ordinary secretory purgatives are ineffective in these cases, hence some agent must be added that will stimulate the motor centers, or functions, in order to stimulate and re-establish the peristaltic movements of the bowels, which function has been suspended by the paralyzing action of the opium. Strychnine in large doses, is an ideal agent for this purpose as it stimulates the above motor centers.

With the secretions set up by the glandular purgatives, and the peristalsis re-established by the strychnine, large watery evacuations are effected, and the elimination of the toxins, ptomains, etc., are thus "initiated" and ultimately compelled. As no more opium is given to interfere with the purgative, the very best results may be expected, however, I almost constantly order either 3 or 4 ounces of epsom salts or castor oil the next morning about six o'clock, at the same hour, also, giving strychnine nitrate, from gr. 1-30—1-20 hypodermatically. Repeat the strychnine dosage every three hours till a thorough elimination has been effected.

Whatever suffering one may experience in the withdrawal of the opium—or any of its derivatives—is due to the toxæmia, and not to the withdrawal of the opium per se, hence suffering should not exist, and in this connection, I wish to denounce the so called "Gradual Reduction" methods of treating any form of opiumism. It is impossible to thus secure the best results. The principles are unscientific and antiquated, and the patient treated cruelly to say the least.

It is our custom to keep the patient under observation for two or three days after entering the sanatorium in order to make a thorough physical examination and to attempt to establish a cordial relation between patient and physician. During these few days of study, the patient is given his usual amount of the opium, and daily baths administered.

Now being ready for final withdrawal of the opium, the patient should be given the physiologically-balanced purgative above referred to and the opium discontinued.

The following is a good formula for such a purgative:

Calomel.....	} oo gr. x
Cascarine.....	
Ext. Colocynth Co.	
Aloin.....	} oo gr. I
Pul. Ipecac.....	
Astropin Sulph.....	
Strychain Nitrat.....	gr. 1.50
M ft ft—capsules—No. IV.	gr. 1.8-1.4

Sig: One capsule at 4, 6, 8 and 10. p. m. Leave off supper, and give the accustomed dose of opium at 10 o'clock, this being the last dose administered during the treatment.

The next morning about 6 o'clock give either epsom salts or castor oil and strychnine as per above. This accomplished, some good sedative must be administered to keep the patient from suffering while the elimination is being effected. Scopolamine hydrobromide, in doses of from gr. 1-300—1-100 every one-half to three or four hours apart, is an ideal agent. It may be necessary to push this drug to the point of delirium in order to keep the patient from suffering for a short period of the 24-36 hours—the length of time this sedative is usually given. At the end of this time, a hot bath is given, and some easily digested food administered.

From this time on the patient makes an uneventful recovery. Of course he is real weak but suffers no other inconvenience; takes a reasonable amount of food and sleeps sufficiently.

Sparteine sulphate in 1 to 2 gr. doses hypodermatically is often given to insure good action from the kidneys, it being a most excellent diuretic, and an ideal heart tonic and stimulant. In my opinion, there is no one drug in existence quite so effective. In 1904 during our Society meeting in this city, this same claim for Sparteine was challenged by an eminent surgeon from another State. However, afterwards this able man that he is, investigated my claims for the drug, and his labors were evidently awarded with success for he now writes in his book on surgery that he knows that he has thus saved the lives of several patients. He used it in the proper doses, observed and saw the results, as all may who honestly and properly test the drug. But little medicine is given usually after the first week. Baths, static electricity, massage, etc., are used as needed.

From time to time I have insisted that it was our duty as representative citizens to agitate the establishment of a State-wide institution for the care and treatment of sobriety and chronic narcotic drug diseases

for the indigent class, and it is this point that I now wish to emphasize. Such an institution may be made self-supporting. There are a number of sanatoria for the more fortunate class who have money, but no place of relief for the poor class.

In establishing a "Home for Fallen Women" why not also one to include this class of indigent "fallen" men? Shall we continue to send these victims to crude prisons instead of committing them to well equipped sanatoria for scientific treatment? Or more horrible still, shall we continue to electrocute these poor victims without first offering them treatment? Within the past few days I was present when the able, big-hearted presiding judge, with crushed heart and tears coursing down his furrowed cheeks, was forced to sentence to the electric chair such a victim.

Wonder if these unfortunate will rise up against us in judgment and call us negligent—unjust—unholy? Suppose we request our next legislature to consider this proposition.

Filarial Elephantiasis in North Carolina.

By James M. Northington, M.D., Boardman, N. O.

Elephantiasis, as its name would imply, is more properly considered as a symptom complex, than as a distinct pathologic entity. It was known to Avicenna and Rhazes in the tenth century and from the fact of its being described in their writings has been given the name Elephantiasis Arabum. In the early years of the 18th century the medical officers of the French forces invading Egypt encountered many cases, and gave the results of their observations wide publicity.

The genus *Filaria* was discovered by Muller in 1787, but it was not until nearly 100 years later that its action as a causative agent in conditions characterized by lymph stasis was established.

It is primarily a disease of tropical or sub-tropical countries; but in this age of travel may be encountered a most anywhere.

The *Filaria Bancrofti* is now generally recognized as the species of the *Filaria Sanguinis Hominiis*, giving rise to Elephantiasis.

The disease is, as mentioned by Royster in a recent paper, rare in this State. Dr. E. J. Wood reports in answer to a query, "I cannot give you the exact number of cases; but I consider it comparatively common in this section." He also mentions that he has observed it frequently among

*Read before recent meeting of North Carolina Medical Society.

Jamacian and Haytian seamen. My own case is that of a mulatto, who lived for two years in Brunswick County, near Wilmington.

History: W. L. Mulatto, 27, single. Seen August 27, 1912. Examination T—103—P—100. General Examination otherwise negative. Right leg red and tense half way to knee. Right inguinal glands tender. Both legs enlarged markedly. History of chill an hour before.

Past History: Typhoid, lasting six weeks in 19th year. Nine years ago had chills every second day off and on for a year. One or two in almost every summer month since then. Less frequently in winter. At 17 right ankle began to swell and had kernel in groin. Swelling would subside and recur at intervals of month or two, lasting one day to a week for a year, when right leg began to swell in day, and subside at night. Two years after first appearance, left ankle began to swell, and followed more rapid but similar course to that in the right. From beginning each fresh onset of symptoms would be ushered in with chill and fever lasting two to five days. Never passed milky urine. From third to the fifteenth year lived near Eastman, in central Georgia, then moved to Brunswick County, N. C., where he lived two years, after first year in Brunswick symptoms developed. Apparently no association with a victim of the disease. Sexual desire and capacity are supposed by patient to be excessive.

Subsequent Course—Symptoms gradually subsided and after four days was able to be up and about. There was no repetition of the chill. He was given quinine and iron, although no malarial plasmodia were reported by my associate, Dr. H. F. Munt, who had direct charge of the case. We were unable at this time to collect night blood for examination for filarial larva, and patient dropped from sight.

On the afternoon of August 24, 1913, Dr. Munt was called to see him, and found him with a gunshot wound of the lower abdomen. There was an irregular opening in the hypogastric region more than an inch in diameter, its centre two inches above the root of the penis, and a half inch to the left of the middle line. This opening was probed gently with a sterile finger and a few fragments of the pubic bone and clothing removed, after which a dressing was applied and the patient taken in a wagon twelve miles over a rough road to catch the first train to hospital. Patient was in the operating room from 1:30 to 3:20 a. m., August 25th. Fragments of bone and clothing, the tissues which were apparently devitalized, and 8 inches of intestine were

removed, and tube placed in bladder, which had been opened by the shot. Patient stood operation well, pulse never going to 150, had fairly good night and rallied promptly. Temperature ranged from 100 to 120 and pulse from 100 to 120 for 6 days, when temperature suddenly mounted to 104 without evident cause, pulse not going above 120. This subsided to 100 in 12 hours. Then followed an irregular decline, sometimes being subnormal, and never going more than a small fraction of a degree above 101, until the 51st day after operation, when temperature mounted gradually in 30 hours to 104, pulse going to 160, and patient complained of severe pain in abdomen. As well as can be ascertained from the chart, this was due to constipation, as it is noted that a Sennema and Magnesium Sulphate were given, and the following night the patient slept well. Temperature reached normal three days later by gradual decline. With minor exceptions favorable progress was made, and after having the fistulous opening in the anterior bladder wall closed on February 2d—patient was discharged on March 3d of this year.

While lying in bed, swelling in legs rapidly disappeared, according to the patient's statement, in 10 days his legs were "nothing but skin and bones." I saw him about 30 days after his admission to the hospital and at that time, except for roughness and pigmentation of the skin, I would not have suspected that there had ever been anything unusual about the parts. Since returning to his usual mode of life, standing on his feet most of the day, there has been a gradual return of the swelling, but no acute symptoms have presented themselves. At present his legs are as nearly as he and I can estimate the same size as two years ago:

Circumferences—Foot: Right, 12"; left, 11½". Mid. leg: Right, 23"; left, 22"; Knee: Right, 20"; left, 18½". Mid. thigh: Right, 20"; left, 19". Chest, 33".

In the last few months blood from the ear, centrifugalized specimens of urine, and blood taken from the legs, in which, of course, there was a great excess of liquid element, have been examined repeatedly and painstakingly, but no filarial larvæ have been found.

The cause of elephantiasis may be said to be anything giving rise to obstruction of the return flow of blood or lymph from a part. For instance, disease and enucleation of inguinal glands, obstruction produced by various tumors, phlegmasia alba dolens, and in case reported by Tedenat and Martin, by cancer of the rectum, breast and uterus. Daniel reports a case of primary tuberculosis elephantiasis of the vulva. Another followed removal of the left breast

(Vandervee). Unna contends that almost all the sporadic cases represent the residual of streptogenes inflammations, the persistent recurrent attacks bringing on a doughy, soft edema, which later hardened with some round-celled infiltration, and scar-tissue formation. It is largely a disease of early adults and middle life, and males are affected in the proportion of three to one. The darker races suffer most, whether because of their unsanitary surroundings or not may be a question.

The changes are chiefly in the subcutaneous tissues, and, at least in the sporadic cases, due to repeated erysipelatous-like attacks, consists principally of hypertrophic connective tissue. The integument too, is usually markedly and irregularly thickened and pigmented, and the papillæ enlarged. Shattuck has undertaken to epitomize the pathology by saying that "the essential characteristics of typical acquired elephantiasis are lymphangiectasis, hyperplasia or connective tissue, and chronic edema." He says further that inflammation when present may be acute or chronic, and is generally traceable to bacterial infection.

Filarial elephantiasis is almost invariably preceded by numerous attacks of elephantoid fever, each ushered in with a chill, usually lasting longer than one of malarial origin, and having all of a severe chill's concomitants, headache, backache, and oftentimes, delirium. The temperature does not descend to the normal with the profuse sweating which follows. Coincident with the symptoms there is an erysipelatous, or pseudo-erysipelatous inflammation of the parts, usually an ankle, or ankle and leg, with pain, heat, redness and edema, and sometimes a discharge of a clear or milky fluid. In the large majority of instances these local symptoms occur without any obvious local cause. The symptoms gradually abate, the general in advance of the local, and in a few days or weeks the only remaining evidence is a slight, persistent enlargement of the part. The period of quiescence varies from weeks to months, or even years, and the attacks vary greatly in severity. The rapidity of enlargement is roughly directly proportionate to the severity and length of the febrile attacks. The tendency is—to grow steadily, but very slowly, worse, the skin becoming rough and warty, the normal folds becoming exaggerated (attachments of unyielding fasciæ), and the parts eventually reaching enormous proportions.

In the scrotal, or genital form, there is said to occur a great deal of pain. So much so that, according to Dieulafoy, we should always think of filariasis in any abnormal case of real colic, which is compli-

cated by early and pronounced congestion of the testes.

While it is not strictly within the province of this paper, it may not be inappropriate to call attention to a very scholarly report of a carefully worked out case of pernicious filarial lymphangitis by Martinez, in the journal of the Ama, dated May 233. Patient had symptoms simulating bubonic plague, and died within 36 hours.

The diagnostic clinical features are, the recurrent, erysipelatous-like attacks, with enlargement and other obvious symptoms, thickening, induration, edema, varicosities, and papillary hypertrophy. Finding the filarial larvæ in the blood drawn at night is diagnostic; but the diagnosis must often be made without this aid, the reason being the same as that which obliges us to say a water supply is polluted with typhoid bacilli, even when they cannot be demonstrated in a drop under the microscope, viz., the comparatively small number of organisms in the large amount of diluent. The position that a consideration of the mode of development of the deformity, and its behavior when its victim assumes the recumbent posture for several consecutive days, should aid in differentiating between the filarial and the non-filarial forms of the disease, appears to the author to be a tenable one. In studying filarial elephantiasis, we are constantly encountering the terms, lymphedema and lymphangiectasis: and in those in which there is an obvious inflammatory cause, we see mention of hypertrophic connective tissue. The behavior of my own case, when put to bed for an entirely different trouble, illustrates the former state of affairs: while the later is exemplified by a case reported by Winthrop as follows:

Mrs. N.—White, age 48, widow, native and resident of Alabama. No family history of tuberculosis, neoplasm, or elephantiasis. Had measles, pertussis and varicella as a child. At age of 15 had a mild attack of erysipelas of left leg, which lasted a week or ten days and gave no further trouble. Menstruation began at 15 and has always been normal. She is the mother of five children, the oldest now 25, the youngest 15. A healthy, active woman until onset of present condition. Following the birth of her second child, 20 years ago, she developed child bed fever, and a few days later a milk leg of the right limb. A painful red swelling appeared in the right groin, and the right ankle became much swollen and edematous, but showed no signs of local inflammation. The swelling above the ankle gradually extended to above the middle of the leg, but disappeared, in great part, when the patient remained in bed or

kept the leg elevated. Occasion she suffered intense pain in the leg, usually accompanied by an erysipelatous-like inflammation with chills and fever. The skin exuded a milk-like fluid, which was especially profuse if the skin was bruised or broken, as frequently. About ten years ago she noted that the leg was becoming gradually harder, and the skin thicker, and nodulated. The swelling no longer decreased when she was in bed or elevated the limb. This hardening of the tissues and thickening of the skin has slowly increased and extended toward the knee. * * * The blood shows no filariæ, after repeated examination, and the cellular elements and hemoglobin and urine are normal.

A condition classed by Behan under the same, "Congenital Elephantoid Dystrophy," might suggest elephantiasis; but this effects the whole of one side of the body, and gives the history of having been present to some extent from birth.

Stelwagon says positively that the disease is neither contagious nor hereditary. However, the opinion has been held for many years that it is communicable through mosquitoes. Dieulafoy says that the pathogenic mosquito is the *eulex ciliaris*; and that the anophels, which transmits malaria does not transmit filariasis; Stiles that the larvæ occurs in a number of mosquitoes, including anophles, *culex* and *panoplitæ*. It seems wise to carefully avoid exposing one's self to the bite of a mosquito, which has sucked the blood of a victim or elephantiasis and better, where possible to keep the insects from coming into contact with the patient.

Rossiter, following the suggestion of Du Broglie, used 30-drop doses of tincture ferric chlorid t. i. d. with most gratifying results in a number of cases. He concludes that the drug has a marked effect on the elephantoid process, decreasing the size of the affected part and restoring functions to an even greater degree.

Many ingenious operations have been devised and performed with more or less success. Rosanow used a combination of the Lanz and the Oppel methods for diverting the course of the lymph, securing anastomosis between the superficial and deep lymphatics by first cutting diamond shaped patches of skin from the thigh and calf, the areas denuded being longer in their vertical than in their horizontal diameters. The subcutaneous tissue and aponeurosis were then cut across in the short diameter of the diamond, then each flap cut down one side so as to make two triangles, which were pressed into spaces between the muscle prepared by a blunt dissection, and sutured. The skin was closed in long diameter of

the diamond to make pressure. The results surpassed all anticipation.

Lanz secured excellent results by incising down to femur: drilling into the bone at lower, middle and upper thirds; cutting strips of fascia lata, and working them into the holes. He also made holes in the fascia lata for drainage. Relief was prompt and permanent.

Kondoleon removed strips of fascia lata in six cases with encouraging results. This operation is reported in detail in an article by Dr. H. A. Royster, in the journal of *Ama* of May 30th, he having successfully performed it in the only case of elephantiasis reported in North Carolina prior to this one.

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Womanhood, From the Physician's Viewpoint.*

(Annual Oration)

JOHN R. IRWIN, M. D., Charlotte, N. C.

I have no apology to make for this subject, only my temerity in presenting it to you this evening. It is as old as Eden and as new as the dawn of the Twentieth Century. It has been the

*Read before the recent meeting of the North Carolina Medical Society.

subject of prose, the theme of orators and the song of poets. It is too interesting to be hackneyed, too important to be neglected.

The tendency in literature to idealize woman is one which is, on the whole, praiseworthy in its spirit and beneficent in its results. It is praiseworthy in its spirit because it is an indication of the reverence in which woman is held by man. If the time should ever be abated and woman should appear to her companion less than she now appears to him, if she should ever exchange her supremacy of influence for an equality of power, he would lose in the transfer almost as much as she. It is beneficent in its results because our life depends upon our ideals. Because woman is idealized by man, woman is inspired to her highest and noblest self, and man is inspired to be worthy the appreciation of one the value of whose judgment he may sometimes possibly overrate.

Nevertheless, whoever reads the signs of the times aright will not fail to comprehend that the day of woman's activity, power and glory is upon us. Through the fevered discussion of the "rights" of woman, which has been one of the striking phenomena of our day—surging upon the shores of our literature, our politics, and our social life, with much of false assertion and unreasonable demand—beating frantically sometimes against barriers of political economy and social morality, whose fall would unsettle the very foundations of society—it cannot be doubted that a great tide of achievement for woman has been gaining ground.

When we look back fifty years and note what women have achieved in educational, business, philanthropic and sociological lines, there is cause for congratulation, and American womanhood stands on a broad, high plateau, with eager faces turned hopefully to the future. But they are yet many leagues from the millennium; and, with it all does she sufficiently realize the duty and responsibility devolving upon her in regard to the betterment of home and humanity? This new century is ushering her in as a decided factor in the world's progress and will doubtless bring her into greater activities and prominence than ever, but God instituted woman many centuries ago, when He set certain limits to her physical development, and He has not yet shown any decided intention of changing her mental qual-

ities into replicas of the biped He created a short time previous, and called man.

Let me say here and now that I have personally no objection to women voting, but I am opposed to any proposed reconstruction of woman which would turn all that admired half of the race into a second edition of man, and in my opinion this would be a very dreary world with only male and female men in it.

We gladly hail the good already done in the reform of barbarous laws and the opening of new opportunities of education and industry. But we need to watch against that tendency to Nihilism, which is the peril of all reforms. Some there are who would sweep away everything existing in order that their new theories might possess the ground alone. But Christian, American womanhood, as it exists today, at this height of human advance, is too fair and precious a treasure to be rashly flung into the crucible of any experiment, in the hope that some better thing may come out. Rude warfare may in a moment shatter a Parthenon which, to the end of the world, can never be built again. We would rather perfect the Temple of Womanhood after the pattern of Cologne Cathedral, where the walls piled by long vanished hands are left firm in place, the stained glass, centuries old, casts its soft light down the stately aisles, while new towers are reared heavenward by the wonderful machinery of today and storied windows of living artists answer those of ancient days; and all according to the plan of the primal architect.

Coming to the question of the intimate resemblances between the masculine and the feminine intelligence, no man would be venturesome enough to dispute these, but he may be pardoned if he thinks—one would hope in no spirit of exultation—also of the differences. It is an unquestionable truth, that men and women constitute different classes of human beings, but it is a distinction without disparagement.

Our modern knowledge of woman represents her as having characteristic differences from man from a biological and anthropological standpoint. Notwithstanding these differences, no one doubts her ability in any sphere of life. Women have proved their power to speak by speaking, to combine by combining, to organize by organizing. She has guided great movements of charity,

established missions, edited journals, published works on history, economy and statistics, governed nations, led armies, filled the professor's chair, taught philosophy and mathematics to savants, and piloted ships across the sea. There can be no true, complete national life unless womanhood has a vital share in its conflicts, its hopes, its ambitions and its triumphs. Miriam rendered Israel a great service and was a contributor to the commonwealth, when she which followed the overthrow of the hosts of Pharaoh in the Red Sea, Miriam's place was in the foreground. One of the greatest treasures the Hebrews brought out of Egypt was Miriam, their first prophetess, but limitation in her life came out in the episode, when she criticised and formulated objections to Moses' second wife, and the part she took in the attempt at social rebellion, and to break down the authority of Moses, which was to imperil the nation. She and Aaron exhibited something of personal jealousy and fear of their own influence when they said, "Hath the Lord indeed spoken only by Moses: Hath He not spoken also by us?" Miriam belongs to the past, but she is a heroine of the Exodus, a living symbol of the time of preparation, a forerunner of the so-called coming woman. The song of Deborah was one of the oldest and noblest lyrics in the world. She could not only write Israel's Marsallaise, but she could lead the armies that her song inspired, and if she had not the visions and voices of Joan of Arc, she had her faith and courage in the unseen. when she and her personally appointed general Barak gained a wonderful victory in the plains of Esdraelon, the "classic battle-ground of scripture," and the leader was a woman even in that early age. Victoria ruled England, and many an Englishman many times sang in adoration, "God Save the Queen." The wisdom of the reign of Elizabeth. "Good Queen Bess," gave England her prestige. Isabella I. of Spain, the patron saint of America, without whose generosity our country today might have been a wilderness, after Ferdinand's refusal, the disapproval of the wise men of her own kingdom, rose in her queenly majesty, and said, "I undertake it for my own crown of Castile and will pledge my jewels to raise the necessary funds." Florence Nightingale brought order and efficiency to the hospitals of the Crimea; and Clara

Bartin, with her clear head and generous heart, lifted up the starving women of Strasburg, and made it possible for them to be self-supporting. Examples of woman's ability and success in every line of endeavor might be multiplied.

But the question more serious in the public mind today is the changing attitude of our womanhood toward social and public questions. The South for many generations has been noted for the chivalry of its men and the modesty and virtue of its women, but it does not require the eye of a prophet to see that there is a widespread decay of conservatism and modesty in our womanhood, which will not only prove disastrous to them but hurtful to the members of the other sex as well. In view of this every one who has a real fellow-feeling for woman, and who is concerned for her material welfare, as a father is concerned for his daughter's, will above everything else desire to nurture and encourage in man the sentiment of chivalry, and in woman that disposition of mind that makes chivalry possible. Our factories may yet go up in smoke, our railroads and telegraphs be made the sport of anarchy and war, our farms become desolate and tenantless as the fertile plains of Italy. With Socialism and Communism looming on the horizon, it is no time to scoff at tenderness, or trample upon love. The industrial and economic are but the outer garments of our civilization. Love is the substance, the indwelling spirit, the soul of all of their activity. The most enduring element of our national strength lies in the fact that our American life centers around the fireside. We are proud to boast of the bravery of our men, the beauty and purity of our women, and they have these qualities because the home is their school and the mother their teacher. The wise Creator, when He made woman, gave her the two highest offices in His gift—those of wife and mother. And it is a pathological fact that women as a sex, must respect and revere the divine mission of their sex, which is motherhood. The moment they outrage or distort or deny the purpose for which they were created they become shirkers and drones. Misdirected government is a bad thing, so bad that the men of this country can be relied to correct it whenever necessary, but misdirected sex is a national tragedy, which, if it is not checked, will degener-

ate the race. Rather may the American woman be the mother of a great race.

The model held up to Christian women is not the Amazon, glorying in her martial deeds and prowess; it is not the Spartan woman who made perfection consist in the development of physical strength at the expense of feminine decorum and modesty; it is not the goddess of impure love, like Venus, whose votaries regard beauty of form and personal charms as the highest type of female excellence; nor is it the goddess of imperial will, like Juno. No; the model held up to woman from the dawn of Christianity is the peerless mother of our Redeemer, and the paintings of the Madonna hang upon the walls of many a library in the homes of our country.

We hear much of the "feminine unrest" now agitating the world. There may be—and certainly are—restless women. But so, one must believe, there always have been. Eve was restless, Judith, Helen and Sappho, and those interesting women who lived in the French courts, the ones who helped the Pilgrim Fathers maintain themselves in their extremely narrow paths of righteousness, the ladies who gathered to sew things for the soldiers at the front in the time of the War between the States, and those others who have denounced their sisters for demanding the ballot. Restlessness is a trait of the species and has no sex, any more than love and jealousy and envy and a liking for power and fame have.

For this feminine unrest, let me suggest as a palliative, or perhaps a cure, the renaissance of the home. Lectures on domestic science and home efficiency should be increased. Hand labor should be replaced by machinery, just as it has been in the factory, and domestic economy and domestic science schools should turn their attention to the practical side of work and emancipation from drudgery. The A. and M. College, located in this city, has accomplished a great deal in the extension and encouragement of agriculture and there ought to be at the University of North Carolina and in all of our female colleges, a course for women in Home Economics and Domestic Science. While governments, both State and National, spend actual millions upon decreasing the toil and increasing the results of the man's work on the farm, for instance, nothing has been done for the farm woman. Let our

public men, teachers, politicians and legislators, who have the good of our country and race at heart, be alert for the modern and scientific endeavor to originate, foster and give welcome place to these courses whenever and wherever they can, and let women learn that scientific or simplified housekeeping is not beneath the attention of the refined nor beyond the comprehension of the uncultured. It is the duty of the rich and the salvation of the poor.

Women should have the best and highest education they can obtain; and education involves care of the physical, culture of the intellectual, and direction of the moral and spiritual nature. I believe it is the duty of every woman to make of her own body the strongest, best machine possible; and I believe that one of the greatest lessons to be taught the women of America today is care of themselves.

This century, though yet young, has already been not inappropriately termed the health age. The things that make life worth while, that really constitute happiness, may be founded on physical health, but do not consist in it solely. In our laudable zeal over hygiene, let us not forget to keep in touch with the higher things. In our emphasis on building muscle tissue and blood for resistance to disease, let us not forget the quality of the neuron through which the spirit sends its message. In our passion for health and vigor, let us not forget "the passion for sweetness and light and for making them prevail."

I believe that parents should patronize, support and encourage those schools in which the Bible is daily taught—not an expurgated woman's Bible—but the Bible of our fathers and mothers; because it is one of the most effective instruments of intellectual culture and mental discipline, which presents the sublimest morals, and which is the true source of spiritual light. In such temples of science our daughters may become as stones polished after the similitude of a palace. A writer urges this most beautifully and impressively in these striking words: "Connect Jerusalem with Athens; intertwine the ivy of Parnassus around the cedar of Lebanon; weave into the wreath of flowers plucked from the vale of Temps, the rose of Sharon, and remember at your festivals that, among the hills of Palestine, there is a hill of tenderer interest

and higher hope than either Ida or Olympia."

Educate them in the truest and broadest sense, and while they may have caught the spirit of the times and become expansionists by invading new territories, and may have been maquerading as the "eternal feminine" or the "new woman," these little excursions and diversions will only make her prize the more her old dominion, and the complexities of her nature will find full play in the evolutions in the American home. For here is the key to the regeneration of the race, the rise or downfall of the nation. Here lies woman's divinest opportunity, her supreme obligation and her richest reward.

The former of our bodies and the Father of our spirits had human homes in mind when He fashioned the soul of woman. Kipling makes one of his characters say, "There are just two kinds of women in the world: Those who put strength into men and those who take it out of them." All that a man hath will be given for his life—but his life itself he holds at the call of something still dearer; and oftenest, and best of all, that is love.

My plea is for the higher morality and the holier womanhood and to emphasize the preciousness of home, because the affections and emotions have greatest power within a narrow circle of intense personal attachment and interest. As their range is widened, their vividness is diminished. And while no one yet can tell what the distinctively womanly qualities of mind may do in the wide world, the ages have proved that these qualities are supremely adapted to the making of home.

In the home-life—in the relations of wife and mother, sister and daughter—the affectionate, emotional nature of woman finds the field of its triumph and glory. There it wields against all the world's strifes and temptations, toils and cares, a great and holy power, such as all the systems of philosophy and philanthropy of all time could not equal. The kind of affection which woman gives and inspires has power to pervade man's whole heart and life, coming up in every change of occupation or pause of thought. Every true man can understand that it was no mere dramatic display of affection, but the simple promptings of his great heart, when President Garfield turned, at the close of his inaugural address, to kiss his wife and

mother, who sat beside him. The thunder of cannon, the waving of banners, the applause of thousands, the assembly of great men, the Presidency itself, however otherwise valued, brought no pleasure so sweet as that of laying them all as trophies at the feet of the self-sacrificing mother, who had been the light of his boyhood's home, and the devoted wife who inspired and shared the cares and toils of his manhood.

Barrie's nice sketch of "Margaret Ogilvie" recites how his mother declared she would be proud to be the mother of Robert Louis Stevenson; as for himself, Barrie vows that all he is or has done he owes to his mother. What an exquisite story is that which Burdette tells of the invalid wife, to whom he read his merry conceits to while away her pain, and who saw his power in her sick room, knew the world admired it as she did, and coaxed him on till, before her sweet spirit passed away, she had seen him on the high places of honor and success.

Dickens has drawn no more beautiful picture of love than that of Agnes Wickfield for her father, as he sinks more and more under the spell of intemperance, and at last comes forth rescued by her tireless devotion. The intense, fervid affection of which the womanly character is capable, reaches sometimes, in such cases, an excess, which, to thoughtless, or cold-natured person, seems absurd or insane, but, just then, to one capable of appreciating it, becomes sublime in its irrationality, seeming like a reflection of the infinite compassion of God.

Such love is stronger than death. The ocean wind brings across the deep the last whisper of the exile dying afar, whose pale lips murmur "Mother!" Under the forest tree where the surge of battle has swept by, the stricken soldier rests, the hand rigid in death holding the photograph of wife and little ones, just as it held it to catch the last glance of the fading eyes. Such devotion the most majestic woman that ever swayed a popular assembly never won. But such devotion any woman who is true, lovely and loving, may win in the humblest home. And of this the world has greater need, for men can make orations, but they cannot make homes.

Language, which is but the crystallized thought of nations, tells the story. Home without a woman is unknown to human speech. The military officer has

his "quarters," the sea captain his "cabin," the herdsman his "ranch," the student or clerk his "rooms," or perhaps, his "den," associated men have "clubs," "societies," "lodges." Woman only has "home"—and man associated with her. The mother can make a home for a grown-up son, a sister for a brother, a daughter for a widowed father. Mother and daughter, grandmother, daughter and granddaughter, perhaps, or a bevy of sisters, will have a "home." But father and son, or a group of brothers, never. Are not two weak points in our civilization now, the living of young men unwed in our cities, trying to amass money for princely housekeeping, when at last they marry? By the time they become worth much money, they cease to be worth anything themselves. Cupid should have less cupidity. We need a revival of falling in love, and this twentieth century needs to exalt and consecrate domestic love, and then a renaissance of the home.

Francis E. Willard once said, "The mission of the ideal woman is to make the whole world homelike. But in my opinion the homelike world will be made only by making it a world of homes. Home can never be generalized, because it is founded upon the love of one man for one woman. Make, for instance, your Masonic Hall never so beautiful, with its velvet carpets, its luxurious chairs, its mirrors and gems of art. Make a Sorosis hall to match, with the added grace that woman's taste will suggest. Let the manners of both societies be never so refined, and their thoughts never so exalted. Let them interchange courtesies, have mutual receptions, and all that, and you still have not touched home. But, when some young man's heart says, with fervid truth, 'She is all the world to me,' and some woman's heart answers with a love that can keep through all the years the spirit of 'John Anderson, my Jo,' and they join their life's destiny in wedlock's deathless bond, there you have home, though there are none of the luxuries, and few of what the world calls the refinements of life.

There is no new woman. They are all identically the same as Eve and Sarah and Ruth. They have the same natures, the same love of family and home, the same desire to be of use to others that women have always had. There is nothing greater in life than this great principle of helpfulness and

service and love for others. It may be the world of home, it may be the school-room, it may be the ranks of fashionable society, or it may be the small country town, but her love and her service are needed, and home-making is the life-work for the majority of women.

When the great Creator bestowed upon woman that property which permits her to be the instrument for the propagation of the human species, there was placed in her care the highest physiological function of which a human being might be capable. The perpetuation of the race is a primary concern of the divinity of biology, and motherhood is her divine heritage. A mission so amazing, so divine, demands woman's soul, her life, her all. Walter Scott or Lew Wallace takes the dead ages and makes their weapons and battles, their ships and houses and temples, and their very horses, intensely interesting to us by weaving around all some vivid threads of personal human life and destiny. And here is a being who may hold such a life in her hand from its very inception, to mould as a potter the clay, for majesty or degradation. If there should come to her a fair living head, with a brain capable of looking across the ages and up to God, with frame of wondrous mechanism, from the blood-vessels that make alive its tiny bones to the delicate cells that pink the skin, all instinct with life and the future, and she able to make of it almost what she will, pity her for the loss of loftier destiny! Not all Rosa Bonheur's canvas horses, no all Harriet Hosmer's cold marbles are equal to one ruddy, smiling, cooing baby, with just the right antecedents behind him and just the right training before him.

The excellences of the great men of all times have usually been foreshadowed, if not exemplified, in the characters of their mothers. Jochebed was the guardian of her infant boy from the edict of Pharaoh, and the boy became the guardian of Jethro's flocks, and then the shepherd, guide, and law-giver of the nation in its great exodus and wilderness march. Elizabeth was the chosen one to whom was given the honor of motherhood to him who was "more than a prophet"—the harbinger of the gospel itself. The genius and intellectual sweep of Goethe were foretold in the many-sided brilliancy of Frau Rath. Hannah's faith found its largest fulfillment, not in the birth and infancy of her first-born son, but in the purity and

strength of the prophet judge and his illustrious career as the restorer of the nation. A woman's gentle voice in the nursery changed the civilization of England. Was there any greater work that Osburga, the queen of Ethelwolf, could have been doing than reading Saxon poems to her sons, and awakening the mind of one who became Alfred the Great! Susanna Wesley found time from the domestic duties and trials of a large household to devote to the secular and moral education of her boys and girls. "Beautiful, amiable, thoughtful, devout, and intelligent," says her biographer, "both linguist and lover, she was no more interested in the parsing of Greek and Latin than in the prattle of her children." Never has the world since the days of Abraham and Sarah, and Mary and Joseph had such a home as that home which gave to the world two illustrious men, a poet and a bishop. The influence of such a mother and such personalities does not cease. We cannot compute what the world owes to this woman who lived and wrought, prayed and toiled so faithfully in that obscure village of Epworth, in the humble parsonage of the eighteenth century. The mother of Charlemagne, a Luther, a Cromwell, a Washington, was doing the greatest work there was to do in the world in her time. Every mother does not have such renowned sons, but the mothers of the unremembered heroes have a right in history's triumphal procession. They, too, were doing the greatest thing life had for them to do.

Every portraiture of true mother-love and home takes hold on the heart of the nations — Raphael's Madonnas and Longfellow's "Children's Hour," Robert Burns' "Cotter's Saturday Night," and it was the inspiration of a wanderer in a strange land, who felt the loneliness and pain which only those without a home can know, embalmed in deathless song and truest sentiment that ever dwelt in human heart or rose on mortal lips—"Home, Sweet Home!" he cried, and immortality echoed the refrain. I know that Appollo swept such harmony from the lyre that the listening gods were charmed, and the world acclaimed him great diety of song. I know that Orpheus, with magic strain, led rocks and trees and beasts to follow him, and so enthralled the underworld that angels gazed thereon with envy. I know that Timotheus, with wondrous melody, subdued the riotous Alexander, awoke at

will within his haughty soul emotions high as heaven, and instincts low as hell, and with a skillful change of chord displaced upon the monarch's lips a sigh of pity with a curse of fate. I know that David threw from his entrancing harp a concord that dispelled the gloom about the brow of Saul, and flooded Israel's palaces with the laughter of music and the joy of song. I know that Eleanor's troubadours at Antioch bewitched the Syrian air with the ballads of the South, and lightened the horrors of the second crusade. I know that the compositions of Palestrina, Handel, Mozart, Beethoven and the rest have vastly elevated man with symphonies sublime. But I know that all of these combined by a master greater than those who as yet have lived into one gorgeous rhapsody can equal not the touching cadence and the simple majesty of "Home, Sweet Home." It contains a sentiment that appeals to men regardless of environment and destiny. It leads them to forget the barriers of tradition, race and birth, and with this song upon their lips all men are brothers in the universal fraternity of God. It is fraternity's battle hymn, and it will be the permanent password when all earth's children have become a common brotherhood. When the Rockies shall lift no more their crags unconquered to the storm; when the Alps shall break their silence, and the Andes dissolve in melody; when the universe shall resound with notes that trumpet earth to judgment—this song fraternity's truest expression, will hush from the translated living and the awakened dead as the most fitting tribute of morality to God.

The home, the training school for our country and for Heaven, and making homes a mission so amazing, so divine, demands woman's soul, her life, her all, for the mothers of the present are the true rulers of the future. In America, and especially in our Southland, every girl is a princess, every woman a queen. And God forbid that political equality, suffragism or "any other creature" shall ever disinherit the princess or dethrone the queen! Long live the Queen!

Some Phases of Metabolism with Special Reference to Carbohydrates.*

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Such a subject cannot be treated in detail in the time allotted at this meet-

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ing. My object therefore in presenting such a paper is that I may awaken an increased interest among the profession in the much neglected sciences, physiology and bio-chemistry.

Paraphrasing an Eastern fable, I might say that in the family of medical subjects, physiology along with bio-chemistry, is the household drudge, who, in obscurity, hides unrecognized perfections. To them has been committed much of the work; by their skill, intelligence and devotion have much of the conveniences and gratifications in the medical world been attained, and while ceaselessly they have been accepted in ministering to the rest, they have kept in the background that their haughty sisters might flaunt their fripperies in the eyes of the world. We are fast beginning to realize the position, the true position of physiology and bio-chemistry. When their true position is awarded them, they will be found to reign supreme in beauty and worth.

Certainly the only foundation for rational therapeutics is a correct understanding of the human body. Until we know more of the physiology of nutrition, quacks will thrive and food faddists abound. Ignorance of physiology tends to make a medical man as credulous as his patients and almost as easily beguiled by the flaming advertisements of the druggists.

Pathological physiology interests the physiologists only as it throws light on the normal function of the body. The bio-chemist on the other hand, is more ready to interest himself in pathologic phenomena, not only because it assists in the solution of physiologic problems but because the study of such phenomena has appeared to be worthy of separate pursuit. We may still, with modesty, call to the clinician's attention, that the science of disturbed function has become one of the important underlying sciences of medical practice and that there are a large group of diseases to which no etiologic line of treatment is at present applicable. Also, many underlying anatomic changes are either unknown or inaccessible to treatment. Yet by correcting as far as possible the essential functional disturbances, which is the immediate cause of the symptom, brilliant results have been obtained. In a large measure these results have been the reward of the labors of the physiologist and bio-chemist. For example, the dietetic treatment of diabetes, the

dietetic and acid treatment of gastric achlorhydia, the use of digitalis in certain forms of cardiac insufficiency, the restriction of chlorides in special types of edema and the many valuable chemical findings in urology are really brilliant examples of the effective work done by the physiologist and bio-chemist. It is also necessary in answering many of the perplexing questions which arise in the clinic to lean heavily on this branch of medical knowledge. For, the physiologist and bio-chemist are especially adapted to make carefully planned observations on the patient and exact experiments on animals.

The body is a great chemical laboratory which deals constantly with a variety of chemical compounds, and their activities and results are of such a complex character as to baffle the most refined methods of chemistry employed in their proteins, carbohydrates and fats undergo many changes before they become a part of or intimately associated with the tissues of the body. They are ultimately subjected to anabolic and catabolic changes and are eliminated from the body in the form of relatively simple compounds as water, carbon dioxide, urea, uric acid and so forth. This long physiologic metamorphosis, with its most interesting and yet perplexing intermediate products, is only known in part. To say nothing of the many pathologic phases of metabolism. At any rate it is known that the process of metabolism may lead to the production, not only of that which is of use to the body but can also furnish injurious and toxic bodies. So, too, any check to the normal processes of elimination may lead to an accumulation in the system of normal waste product, with a subsequent intoxication.

In selecting the carbohydrate group for this study in metabolism I do so because it constitutes the greater proportion of our dietary. Ranke gives the approximate composition of the diet of a man of average weight, and doing a moderate amount of muscular work: protein 100 grms., fat 100 grms., and carbohydrates 240 grms., and if much muscle work is involved, the carbohydrate content of the proximate principles may reach 400 to 700 grms.

Another reason for the study of the carbohydrates is that in such a study it shows all three classes of the proximate principles co-operate in maintaining all of those chemical processes which lie at

the root of the existence and activities of life itself. For instance, we now know how much in error were the ideas of those who claimed that protein alone was necessary for life and that protoplasm was simply living protein. Protoplasm, the great basis of life, must now be regarded as a large complex, in which proteins, fats, carbohydrates, inorganic salts and water all play their part and of which each is a necessary constituent. Proteins while they are necessary to furnish protein to the tissue, have their individual characteristics in their amino-acids. The food must contain just those amino-acids which are necessary for the building up of protein in each separate tissue. Besides certain groups of the protein molecule appear to serve as mother substances of hormones and of other chemical compounds which play a dynamic rather than a static part in the phenomenon of life. That is to say, they supply conditions for activity rather than furnish material for the production of energy. The simplest example of such a function has long been recognized in an empirical way by the French chef who salutes you with a delicious bouillion to call forth your "appetite juice" for the viands to follow.

Carbohydrates not only act as sources of energy but they are necessary in building up of protein in the protoplasmic complex, and without them protoplasm cannot utilize the fats which it contains or with which it is supplied in its food. Carbohydrates by themselves are not available as food but require some connecting link, which may be protein in character, to enable their association with the active part of the protoplasm and their utilization by oxidation. At the same time, the study of carbohydrate metabolism shows that there is a possibility that these proximate principles may be converted one to the other, that is to say sugar may be formed from proteins, possibly fats and fats may be formed from carbohydrates.

I shall purposely omit, for lack of time, an account of the chemistry of the carbohydrates or the chemical processes which they undergo during digestion. Such information may be gained from any text-book on physiologic chemistry. It is enough to say here that the carbohydrates are supplied chiefly in the form of starches (polysaccharides) and sugars in the form of cane sugar, and lactose (diasaccharides). And it is dur-

ing the process of digestion that the carbohydrates are converted by enzymic action into the simple monosaccharides, dextrose, levulose and galactose. These sugars are now absorbed by the cells covering the intestinal villi and carried in the portal vein to the liver. Some of these simple sugars are allowed to pass on as they are immediately required by the tissues. The greater portion however is stored in the liver as glycogen. A study of their metabolism starts at this point, that is when they enter the circulation as monosaccharides.

Some of the interesting problems of carbohydrate metabolism is the part that sugar plays in the production of energy, in the nutrition of the tissues of the body and in what form it is excreted from the system.

In order to form any correct conclusion it is necessary to know the changes which carbohydrate food undergo in digestion and the significance of carbohydrate cleavage, that is the splitting up of the more complex carbohydrates, and also a knowledge of their absorption. It is also necessary to have a knowledge of the content of sugar contained in the portal blood. While this determination is a matter of great technical difficulty, yet elaborate series of data are already available not only in the portal blood but in the systemic circulation. Already the mention of hyperglycemia begins to sound almost as familiar as the every day reports of the clinical laboratory with respect to urinary findings. The percentage of sugar in the portal blood from .05 to .4 per cent, the lower figure being reached in advanced starvation, and the higher during a meal rich in carbohydrates. The sugar content of the blood obtained from the general circulation is fairly constant. We may say in round numbers, 1. per cent may be taken as a standard of the individual in health. It is interesting to note here that in the typical form of diabetes it is accomplished by hyperglycemia. Sometimes this occurrence takes place before the other symptom, namely, glycosuria. Of course in this pathologic condition a large range in percentage of blood sugar is not uncommon. Data given by Rolly and Operman gives some idea of this range from 4. per cent even as high as 1 per cent. Even the cerebro-spinal fluid may be rich in sugar under these conditions as well as the aqueous humor.

We cannot account for the absorbed

sugar as existing in the blood, allowing 500 c.c. to the full grown man, only about 10 grms. Nor can it be accounted for in a free state in the tissues, that is in the muscle for if they be examined in the fresh state only minute traces of sugar will be found. Hence, there must be some other place for the storage of sugar in the animal body. There must be a place where the percentage of sugar in the systemic blood is regulated. This must hold because if the sugar per cent is raised in the slightest degree above the fixed upper limit, say 2. per cent sugar is immediately secreted in the urine. The conclusion must necessarily be arrived at that there must be organs to store up sugar and at the same time to regulate the output. This brings us to that interesting study, begun some fifty years ago by Claude Bernard.

Claude Bernard, that great French man, of whom his admirers loved to say, "He is not a physiologist, merely; he is physiology itself," discovered the glycogenetic function of the liver along with his researches on the ductless glands. The liver of course is not a ductless organ, but he noted that the amount of its biliary output seemed utterly disproportionate to its enormous size. Particularly when we consider that in the case of the human being the liver contains, normally, about one-fifth of all the blood in the entire body. Bernard discovered that the blood undergoes a change of composition in passing through the liver, and that the liver cells have the power to convert the carbohydrates that come to the liver in the form of monosaccharides, into a substance whose chemical structure resembles that of starch. He isolated this body and proved it to be a polysaccharide which would yield dextrose by hydrolysis and to this substance he gave the name of glycogen. In this fifty-odd years that have elapsed, numerous facts have come to light. For instance, the post mortem resolution of glycogen into sugar due to enzymic action, and also the reversibility of the actions of enzymes as demonstrated by Croft Hill.

While the amount of glycogen contained in the liver varies with amount and nature of food taken, the maximum amount has been found to be about ten per cent of the total liver weight. Hence, in the case of man, with a liver 1500 grains the greatest quantity of glycogen would be 150 grms. So there must be

some other place in the organism besides the liver where this excess of liver may be stored. The muscles contain about 1 per cent resulting in the storage of about 150 grms. This only accounts for 300 grms. while our dietary often contains more carbohydrates than this. So it is concluded that a considerable amount of carbohydrates are converted into or at least incorporated with fat or protein. The many experiments carried out in animal feeding proves this fact.

This paper will not permit me to go into detail in giving the direct and indirect method in the experimental studies to ascertain what food stuffs lead to glycogen formation. The results of such investigations are by the direct method, whose results are controlled by the indirect, that glycogen is formed from the fermentable sugars, dextrose, levulose, and galactose. The polysaccharides, which upon degestation yield dextrose or levulose form glycogen. Since the time of Bernard, it has been claimed that proteins also give rise to glycogen in the liver. Some observers deny this claim while others affirm it. In order to obtain any satisfactory conclusion in the matter the indirect method of determining glycogen value has thrown much light on the subject. The indirect method, by the way, is to so alter the metabolic machinery by certain operations as to render the animal incapable of utilizing sugar. So if sugar be introduced into the body or formed within the body, it will be excreted in the urine. Now should the administration of any given food material cause an increase in the amount of glucose excreted, that material must be regarded as a source of sugar and therefore a source of glycogen. McLeod sums up the results of such investigation by saying that glycogen formation does probably occur by feeding with proteids which contain a carbohydrate group. There is no unequivocal evidence so far that this is the case for such proteids as a case in which contains no such group. The old question urgently requires reinvestigation. Since by the indirect method evidence undoubtedly points to sugar formation from all proteids.

As to glycogen being formed from fats, experiments carried out fail to show that glycogen originates from the fatty acid components; proof is not lacking, however, that glycerine is not a glycogen former.

The fate of glycogen which is stored

up in the liver is of much interest and two theories as to what becomes of the glycogen are advanced. Bernard's theory is, that it is a reserve carbohydrate, and, that whenever the amount of sugar in the systemic blood falls below its normal percentage, liver glycogen is reconverted into sugar, which by way of the hepatic veins, empties its contents into the general systemic blood, so that the average sugar per cent is maintained. The evidence stands in favor of this theory. Accepting this theory regarding the fate of glycogen, we are at once brought into the realm of catabolic activities. That is, in what manner is the sugar disposed or destroyed? Examining the excreta, sugar is not found under normal circumstances either in the urine, cese or sweat. Hence, it must be concluded that while sugar is not used up, it is decomposed and eliminated from the organism in some other form than sugar. In examining the respiratory products, it is found that they contain carbon dioxide and water; so, too, is water found in the urine and sweat. Carbohydrates contain only carbon, hydrogen and oxygen. So it would be a justifiable assumption that they are oxidized and excreted as carbon dioxide and water. Moreover, the respiratory quotient substantiates these facts especially after a meal of carbohydrates alone. This appears to be a simple fact of chemical metabolism and while carbon dioxide and water are the final products of oxidation, just what intermediate bodies are formed before the attainment of this final condition is at the present time unsolved. Many theories are advanced claiming that the lactic acid is the first product which is finally converted into carbon dioxide and water. Another theory, which is interesting and certainly has some experimental foundation, assumes that sugar is first broken up into carbon dioxide and ethyl alcohol. The alcohol is then assumed to be oxidized to carbon dioxide and water. This experimental justification is furnished by Stoklas. He claims to have demonstrated that a very large number of the different organs and tissues of the body possess enzymes precipitated by alcohol ether treatment, which are capable of effecting this alcoholic fermentation.

Anyway, it is evident that there are two processes called into play in the breakdown of the carbohydrate molecule, namely, a process of disruption

and a process of oxidation of the disrupted groups. The point here, of intense interest to the clinician, is, that the failure of either one of these processes, might be the immediate cause of abnormal metabolism of dextrose in the diabetic condition. Which one of these processes is at fault is hard to say, though deficient oxidation does not appear the immediate cause of diabetes. It is more probable that it is the lack of disruption of the dextrose molecule. Certainly it is the primary cause of non-utilization of sugar by the organism. It is also evident that the disrupted process begins before the oxidating process. That is to say, oxidation is impossible until the large sugar molecule has been disrupted into smaller groups. In the severer forms of diabetes, we know that the oxidative function is much depressed for on account of this depression there appears in the urine incompletely oxidized bodies, such as beta, oxy-butyric acid, aceto-acitic acid and acetone. When we think of diabetes as nullifying the power of utilizing dextrose in the organism, we also must see that in order for the organism to obtain the necessary energy for life, it is compelled to utilize now the two remaining proximate principles, fat and protein. Sufficient quantities of these two principles are not always absorbed from the intestines, so that fat and protein in the tissues are used up with resulting emaciation and death. In such cases this is really an acute starvation. In diabetes, however, death may result from that well-recognized clinical symptom, known as diabetic coma. This coma is associated with those incompletely oxidized bodies just mentioned, betoxy-butyric acid, aceto-acitic acid and acetone. The presence of these would indicate that the coma is due to an excess of these bodies, their source is somewhat obscured. It is not derived from proteins nor can it be derived from carbohydrates alone, because it is produced in abundance on a carbohydrate free diet and at a stage in diabetes when practically all the tissue carbohydrates are used up. Hence, we must look for the source of these bodies either from the decomposition of fat or a synthetic process where indirectly they may come from any of the proximate principles. Their origin from fats is a fairly simple chemical process. So, in ordinary circumstances, is oxidized to carbon dioxide and water

but as a result of defective oxidation, we have the intermediate acids and acetone produced, and eliminated in the urine.

More light, in all probability has been thrown on the whole question of sugar metabolism and glycogen formation and the relation of sugar to other materials in the body by a study of Experimental Glycosuria. It would be interesting to discuss in this connection diabetic punctures; the results of the injection of salts; the production of glycosuria by phloridzin injection; diabetes produced by the extirpation of the entire pancreas, but time will not permit detailing these interesting experiments. Results from these experiments show that the glycogen storing function of the liver is under nervous control. A fact proved by diabetic puncture. Also if the liver cells are in a state of impaired vitality, a mild form of glycosuria may ensue. It is also easy to understand that a transient alimentary glycosuria may occur when too much sugar comes to the liver to be dealt with adequately by that order. Dextrose is carried to the muscles and absorbed to the tissue protein and it is possible that the internal secretion of the pancreas is an all-important factor in stimulating the tissues to take up dextrose. For, by experiment, when the entire pancreas is extirpated an intense glycosuria follows, lasting until the death of the animal. Here it is evident that the protein and fat supply of the organism, besides its contained carbohydrates, must be called upon to furnish the excreted sugar. The injection of phloridzin produces glycosuria but differs from all other types of glycosuria as it is unaccompanied by hyperglycemia. It is due to a disturbance of the kidney, itself. Most probably in the buccal cells lining convoluted tubules. Indeed, probably more accurate knowledge concerning dextrose metabolism in the animal body, has been gained by investigation on the form of experimental glycosuria than by those made on any other, whether experimental or clinical. Hence, it is looked upon as a standard method in the study of the metabolism of carbohydrates.

To sum up the observation on animals it is found that glycosuria resulting from hyperglycemia may be produced by the following methods:

First. Overfeeding or the injection of dextrose.

Second. Diabetic puncture.

Third. Injection of strong solutions of sodium chloride.

Glycosuria without hyperglycemia may be produced phloridzin.

The Use of the X-Ray in the Treatment of Inoperable Cancer and Superficial Epithelioma of the Skin.*

By R. L. Pittman, M.D., Fayetteville, N. C.

It would be out of place and indeed useless for me to review with you or to quote the various statistics as produced by means of Röntgenologists of the present time as to the value of the X-ray in its treatment of the above maladies. All of this information can be obtained by referring to your libraries, if any of you are interested in this side of the subject. It is my intention to present to you a few facts based entirely upon personal experience in the X-ray laboratory of the Highsmith Hospital, Fayetteville, N. C., and the numerous clinics which I have visited. I am sorry that I can not have present some of the patients whom I have treated with the various forms of malignant diseases in order that I might make my subject plainer and more impressive upon you. But to all of your who have seen cases treated with the X-ray, I am sure that you will not doubt the benefit sometimes received from this means of treatment.

As to the pathological changes which take place in the cellular tissues which have been exposed to the rays, I will not describe. It is essentially the diminution in the blood supply with granular degeneration of the protoplasm of the cells, with gradual absorption of the degenerative elements. This has been proven by microscopical study of the sections of the exposed area from time to time. The X-ray depends for its virtue upon the following facts, in the treatment of malignant diseases. It produces a constriction of the arterial blood supply to the diseased area, with gradual degeneration which is the result of a decrease in the nutritive elements of the cellular tissues involved. This is true of the cancer cell which is in itself more susceptible to the rays than those cells of the surrounding healthy tissues, therefore the quantity of current necessary to produce degenerative changes in cancer cells has not the same effect upon the surrounding

*Read before recent meeting of North Carolina Medical Society.

tissue when properly used. If it were not for this fact, X-ray exposures would cause such serious burns that exposure of the diseased area would be inadvisable. The effect of the rays does not depend upon the quantity of the current passing through the parts but on the contrary upon the amount absorbed by the cell through which the current passes. For this reason, as we all know who are acquainted with X-ray apparatus and tubes, the tube of low vacuum gives off softer and more absorbable rays than one of higher vacuum. For this reason a soft tube of low vacuum is preferred in treating superficial growths, while a higher vacuum is desired in one more deeply seated. The distance of the tube from the exposed surface in my opinion is of little or no value. I usually place the tube from four to six inches from the surface which I am treating and protect as much as possible the surrounding healthy parts, never using anything more permeable than lead plate not less than one-sixteenth of an inch thick as the rays will penetrate any body including lead of less than one-sixteenth of an inch. Never expose a part longer than is absolutely necessary, being guarded by the reaction from the previous dosage. I do not recommend the use of the hand to regulate the strength of the current to be used which some years ago was the common method used to determine the dosage to be given. It was at one time recommended that any tube that would give the shadow of the bones of the hand under a fluoroscope screen would be suitable for treatment. Personally I prefer a tube of low vacuum, sparking at about two inches giving from three to five milliamperes, varying from two to six minutes and usually about four minutes to a treatment. Three or four of such treatments will almost always give signs of a therapeutic limit, which is always an indication to discontinue the treatment until inflammatory signs have disappeared. These are reddening of the skin which was exposed to the rays, the occurrence of small blebs, dilation of the arterioles in the skin, and itching of the skin. A period of from ten days to two weeks is required for such signs to disappear and it is during this time that the most marked improvement is manifested in the growth. After giving these remarks to explain to you how the effect is produced or the way in which we

think it is produced, I shall now speak of the application of this means of treatment to some of the forms of malignant diseases.

First. It is not advisable or even indicated to expose carcinoma of the breast or any other portion of the body to X-ray treatment when the consent of the patient can be obtained for radical operation. This is true with one exception, that is superficial epithelioma, especially on the face and where an excision would result in a scar noticeable to every eye, not only the professional man but that of the laity, for this reason many people object to the removal of such growths.

Second. The X-ray treatment is preferred because all the cells of malignant character are destroyed when the growth is removed by means of the X-ray, whereas if excision of the growth is practiced, it is possible and often true that some of the cancerous cells are left in the tissues and sooner or later will reoccur. This of course may occur in the growth when treated by the X-ray but is not nearly so likely to occur. I have seen a number of epitheliomas cured by the X-ray which have remained cured for a period of from five to ten years.

Another advantage over the knife, the fact that in many instances where the growth is extensive, removal would not be practical. Again, it is true in epithelioma, especially when involving the nose, eyelids and in many cases of the lip, for here removal would give rise to severe and permanent deformity. I now have a patient under my treatment who has suffered from extensive epithelioma of the nose and will not submit to operation. In fact removal by operation should not be practiced, as a removal of the nose would be necessary to bring about a cure. She is responding nicely to treatment at the present time. She has had three exposures and a perceptible change has been noticed and I predict that she will recover. During the past five years I have treated 108 epitheliomas, principally of the face, varying in size from a split pea to that covering one-half of the back of side of the neck and in not a single case have I failed to secure as yet a permanent cure without a single return and with very little scarring, without contraction of the skin and in this way reducing deformity to a minimum. The number of treatments necessary to re-

move a growth depend upon the character and size of the growth and the amount and character of the current used. The number of treatments usually range from four to twenty. Treating them every three days until a therapeutic reaction is secured, then a period of rest for twelve or fifteen days until the inflammatory signs have disappeared, then treatment is resumed the frequency of which can be regulated by the reaction produced in the tissues but is usually treated at greater intervals and shorter exposures than those of the initial exposures. It is always advisable to instruct the patient to never apply ointment to the growth while under treatment, this will aid you in ascertaining fully the effects of the rays upon the skin. Any portion of the skin naturally exposed to the atmosphere, such as the face or hands, will stand a more vigorous exposure than will the skin protected by clothing. Especial care must be exercised in the treatment of any growth located in the axillary space or groins as in these areas the skin is very susceptible and care must be exercised to prevent serious burns of the skin. In the treatment of inoperable carcinoma of the breast, tongue or any other portion of the body, it is not advisable and really is an injustice to X-ray Therapy. For the simple reason that a failure to cure is not charged to surgery but to the X-ray. For this reason a thorough explanation should be made to the patient and he or she should be told that the exposures are not given with the intention to cure but to relieve pain, constrict the blood vessels, reduce hemorrhage, in this way making the patient more comfortable and in a more or less degree arrest the rapid growth of the disease. In many cases I have found that the X-ray exerts its greatest beneficial influence in carcinoma when a radical operation has been performed with hope of recovery and in spite of the surgeon's efforts, soon a small pea-size growth can be felt, meaning a recurrence of the carcinomatous growth. It is in this class of cases that the X-ray is of decided value. In this particular class of cases, I have had a happy experience with several patients. At the present time I have under treatment a lady who was operated upon two years ago for medullary carcinoma of the breast. Two months after operation it reoccurred in the form of several hard pea-size masses in the skin. X-ray ex-

posures were at once instituted, reaction secured in three weeks, making a total of six treatments. Treatment was discontinued for ten days and when the inflammatory signs had disappeared the recurrent masses had also appeared. I saw this patient one week ago and there are no signs of recurrence whatever. The skin and underlying tissues are smooth and the patient feels well. Such cases are to be kept under careful observation and if at any time these masses appear, then several exposures should be made and same removed. It is in such cases that the X-ray is of decided value over the knife.

In conclusion, I would state that X-ray Therapy plays its most important part in the treatment of superficial and extensive epitheliomas of the face and hands. Second, in the removal of recurrent carcinoma in soft tissue where a primary operation had been performed in the beginning but such being a protected the precious life of Moses, and in the first great act of rejoicing failure, then as stated above X-ray Therapy is of inestimable value in arresting such recurrence of the primary disease. Third, to relieve pain and hemorrhage and to some extent arrest the rapid progress of inoperable carcinoma.

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Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sauder & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed, No "just as good" allowed.

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EDWARD C. REGISTER, M. D., EDITOR
CHARLOTTE, N. C.

GERIATRICS.

Professor Nascher has at last fairly launched his new specialty—Geriatrics, the study of diseases of the aged. The Post-Graduate College has instituted a chair with him as its incumbent; and his text book has been issued with a flattering introduction by Jacobi.

There is much to be said in approval. The diseases of old age are even more marked by peculiarities than are those of infancy. The pathology of age has never been studied minutely; and yet it is of great interest, especially to the aged and aging. In early youth it is useless to preach—the Boy replies with a gay laugh and a careless—"A short life and a merry one for me." Middle age listens, and admits the wisdom of our warnings, but hasn't time to heed. He promises that when this one job is done he will begin to take care of his health, but one completed work entails another more pressing, and he never stops until some rude shock stretches him helpless in his bed—or his grave. But Age knows. He is tired of work, careless as to its rewards, most of which have turned to apples of Sodom in his mouth, and he ardently desires rest. As death approaches it looks more formidable; and we all, at every age, dislike to submit to the inevitable. Does not the prospective mother own that her principal reason for dreading maternity is that she feels she can not get away from it?

The older a man gets, the more he dreads death; and the greater is his appreciation of the care and the skill that postpone it. Of course he knows that sooner or later it will get him, but he likes to feel that the doctor will keep him alive as long as possible, and not allow him to be taken off prematurely.

The patient believes in us, he is anxious to be helped, and he can be depended upon to obey our every suggestion to the letter—what more could we ask of patients except that—as is usual with our elderly patients—they are able to duly recompense us for the care they so appreciate.

The pathology of the aged is peculiar. In their bodies may be found relics, residues and consequences of the maladies and accidents of their previous years. They may carry about the germs of dysenteries, typhoids, malarias, pneumonias, syphilis,

gonorrhea; various local diseases and injuries; disabilities variously acquired. The human body is a wonderful mechanism, but it is emphatically not built like Holmes' one-hoss shay, and has always its *locus resistentiae minoris*. The infirmities of age are apt to manifest themselves at this point.

But the most characteristic sign of senility is what is erroneously termed rheumatism. Strange that the pathology of this very common ailment is so generally overlooked. We all know the etiology of hypertrophy, whether of the cardiac ventricles in valvular disease, or of the athlete's arm. The axiom:—*Ubi irritatio, ibi affluxus*, is as universally acknowledged as when, in the dim distant past, it was first enunciated. But who thinks of applying it to the muscular apparatus of the aged? From the ordinary exercise of the muscles of every man, athlete, workman, sedent, comes the afflux of blood, with increased nutrition of the muscle fiber, and of the sarcolemma as well. In the course of years the constantly growing connective tissue exeroaches upon the muscle fiber, and the latter yields to the pressure and degenerates. Force decays, while the semblance of robust strength remains. The willingness to work may be there, but when the muscle is called upon for exertion we get the protest of degenerated muscle fiber, pain.

While this pain, like most others, is termed 'rheumatism,' it is in truth a typic myalgia, due to the causes and amenable to the treatment of other forms of this malady. It is easy to demonstrate its presence: Take a faradic battery; turn on a current strong enough to induce muscular contractions, and apply the negative pole to those in the region of the pain. When a degenerated or myalgic muscle is thrown into strong contraction the characteristic pain is induced. Reverse the current, turn it down until it no longer induces pain, and, applying the positive pole through your own hand, you have the most effective form of massage, and one that gives the greatest relief to these myalgic distresses. Besides, nothing is so effective in restoring whatever degree of power is yet capable of being developed in these muscles.

This instance, we trust, may indicate what a fine field exists in the study of geriatrics. Dr. Nascher has labored for years in the attempt to interest the medical profession in this matter; and we are sure he has the approval of every man past the age of fifty—or should we say sixty—or seventy?

SNAKE BITES.

A writer in a medical journal recently described his treatment of a man bitten by a rattlesnake. When he received the bite the man "straightened up, coiled like a serpent, turned half round, his face turned very dark, and he fell forward as one dead."

The doctor found the man lying on his stomach, his face and skin dark purple, unconscious; comatose, respiration stertorous, apparently moribund. Here is the treatment:

"Placed carbonate of ammonia at his mouth for inhalation; opened his wound to let blood flow freely, then cauterized it. Ordered brandy every hour, he to take a gallon each 24 hours; every two hours a strong decoction of juniper, buchu, uva ursi and marshmallow as a diuretic. Gave instructions to keep him in constant motion, with head and shoulders elevated."

At the end of 24 hours the respiration was normal, the color and the pulse much improved, the kidneys acting freely. In fifteen days the patient was in good health.

If this treatment was really carried out as ordered it is folly to talk of the day for miracles being past.

Of the group of toxins in the venom of the rattlesnake the principal ones are a vasorelaxant and a hemolysin. For the latter there is as yet no known remedy. The only hope for the patient lies in keeping him alive until the system may perchance cast off the poison, and renew its stock of oxygen-carrying red corpuscles. The inhalation of oxygen might be of value were it possible to obtain it in the remote localities in which the pit vipers are still to be met. Rest and nutrition are essential, and in the case quoted rest was energetically prevented, and food withheld. The vasorelaxant toxin acts directly upon the coats of the great splanchnic veins, of which the capacity is so great that the bulk of the blood collects there, leaving the brain anemic. This is the cause of the vertigo, syncope, and death. Dyspnea is due to the hemolysin.

This vasorelaxant is directly antagonized by strychnine, which must be given in full and rapidly repeated doses until tonic muscular contraction has been induced. This effect must be sustained by continued doses until the unknown stock of venom has been exhausted. Fabulous doses of strychnine have been thus administered, with impunity, since this salt and the venom mutually antidote each other; even several grains of strychnine having been found requisite.

The ideal treatment of snake bites lies in the use of nitroglycerin, atropine and stry-

chnine—the first to quickly flood the brain with blood and arouse the parietic nerve centers to activity; atropine to increase and sustain this effect; strychnine to enhance the reaction of the system with these remedies, to 'take up the slack,' and to combat the action of the venom. The dose should be 1-4 milligram of each, repeated every two minutes until the face flushes, then often enough to sustain this effect. Meanwhile additional strychnine should be given hypodermatically in doses of three milligrams every half hour, or even more. But the doctor must not get excited and push this potent drug recklessly, but watch the action and strive to fit his doses exactly to the need.

How as to the brandy? Since alcohol itself paralyzes the vasoconstrictor, it is evident that it adds to the peril from the vasorelaxant venom, the immediate cause of death as a rule. The only element of the case for which alcohol may be considered a remedy is—Fear!

How important this feature may be, is well illustrated by this ancient tale: A man was bitten by a 'snake,' and presented the typical symptoms. Whisky was poured in unsparingly, but with no evidence of any effect whatsoever. Somebody suggested applying the liver of the snake to the wound, and a friend went in search of the reptile. Passing along a path by a clump of bushes, the man felt a sharp blow on his ankle. He thought he too had been struck by the snake, but looking closer found he had been pecked by a setting hen. Returning to the sick-room he informed the patient what had been the true nature of his wound, whereupon the man at once became very drunk from the whisky he had taken. Intense fright had inhibited the action of the alcohol; this fear removed, the spirit exerted its usual powers.

Fear may be relieved by alcohol, and men die of fear. But are we so poor in therapeutic resource that we must add to the true peril from the venom in order to assuage the fear?

In the case quoted the patient could not have received the prescribed treatment and lived. The four husky men nursing him undoubtedly accounted for the brandy, and mercifully permitted the fortunate patient to rest; and therefore he recovered.

It should be more generally known that only ten per cent of rattlesnake bites prove fatal, under any treatment; while the mortality after copperhead and moccasin bites is much less. Not knowing this, but looking upon such a wound as necessarily fatal unless treated, the man who treats 100 cases with but ten deaths is quite likely to

vaunt his treatment as successful; finding excuses for the few failures readily.

MR. ENGELHARD HAS THE FLOOR.

That our readers may comprehend just what they are up against we present a few extracts from the writing and speechifying of Mr. Engelhard. The significance of the matter is that Mr. Engelhard has the retail druggists as a body back of him. The sort of stuff here quoted has made his Western Druggist the most widely circulated journal of the drug trade. The wholesale abuse of the medical profession in which he indulges meets the hearty endorsement of these gentlemen. He expresses their sentiments. Here they are: "The medical diploma has covered a multitude of sins, ten thousand sins to every function of prescriber, dispenser and health officer. The time has come to demand that the medical diploma shall be limited to its proper privilege, that of combating disease and of prescribing for the sick." "As between the evils of medical dispensing and those alleged to be associated with proprietary medicines the one is as a mountain to a molehill." "Will the N. A. R. D. continue to talk about 'more cordial relations,' to sibilate sweetly about the naughty dispensing doctor and tremble with joy for his friendly nod, when its voice should be one of thunder and its battle ax be lifted in determined defiance?" (1) Editorial in The Western Druggist for July.

"When the doctor does his own dispensing nobody but the doctor knows what the patient gets. (Applause) "We presume the applause was rendered because owing to this secrecy the Druggists Syndicate, Limited, could not stay the doctor's prescription and have it made up for sale by all the stock-holding retailers.

"I stand here as a defender of personal freedom in the taking of medicines. I do not believe that the interests of the nation demand that every man shall surrender his intelligence, his will, his health, and even his life into the keeping of the medical practitioner. (Applause). "Wow!

"The average man knows only too keenly when he is not well, and the average man feels he is able in most cases of everyday ailments to prescribe for himself; he asserts for himself the right of personal diagnosis and the right to treat himself the way he thinks best. He will certainly be very much better satisfied, and the psychic effect will be much better on him, than if he goes to a doctor, has the doctor examine him, scare him almost to death with an appallings prognosis, gets a prescription, when he surely will begin to think he is

awfully sick. Once make the confession you are sick enough to have a doctor, and you will be sick. Go once to the doctor, and you will go a dozen times. (Applause)" If you are not sick when you go, you are pretty sure to be sick before you get through."

"I claim that a man who feels he knows what is the matter with his internal economy and acts on that knowledge, has the right to do whatever his intelligence may tell him to do; he may take a proprietary remedy or go to the regular practitioner, or to the drug store, or to the osteopath, or the Christian scientist." Any man may treat himself then, the problems of diagnosis and pathology being very simple and easy; but when it comes to dispensing drugs this is a matter so complicated and difficult that, "the scle purveyors of medicines of all kinds shall be the druggists."

Mr. Engelhard says nice things to the patent medicine men but he holds a club over them: "If he (the druggist) cannot secure compensation by legitimate means he will too often get it by means you will deem are wholly illegitimate. So long as you fail to protect the retail druggist in adequate profits do not expect him to stop substitutions. "He recommends your goods if you pay him enough; if not, he advises something just as good. There is no question of morals here and not a thought of the patient's interests—it is just money.

"The infamy of some co-operative stores is that they watch the market, and the moment an article, by shrewd advertising, by honest advertising, sails into public prominence, they raise the pirates flag. "For the Druggists Syndicate to steal the doctor's prescriptions is all right; but for a department store to employ a licensed pharmacist and sell drugs is criminal. But people never do agree on questions of morality.

As to the doctors—Mr. Engelhard quotes Bevan, Flexner and other traducers of the profession and from them he deduces: "The crowning menace to the health and life of the people of America to-day is incompetency or worse in the regular medical profession." "The doctor has the right to enter the sick chamber, to diagnose the disease, be he competent or incompetent or perhaps even criminal, to think of the remedy, to administer the remedy, and if the patient dies to write the death certificate and bury with the patient all knowledge of his ignorance, his carelessness or his criminality "Make every medical practitioner the servant of the state, and prohibit entirely the services of private practitioners. (Applause.) Yet retain for every man the right to select for himself a doctor, drug-

gist, patent nostrum, etc., as before said by Mr. Engelhard.

"Two thirds of the medicines now prescribed by the physicians never see the doorway of a pharmacy." Good news. We had no idea our colleagues had caught on to the Drug. Syndicate and were protecting themselves so generally.

"More and more the pharmacist is being eliminated and the dispensing doctor placed upon a throne where he is medical judge, jury and mayhap executioner. "Doctor, are you really enacting the role of fool-killer? If so, how about Mr. Engelhard?

"Who are the men who clamored for pure food and pure drugs legislation? These same doctors. "Thanks. True, it cuts off our new incomes by preventing disease, and that is a thing that is evidently Sanskrit to Mr. Engelhard.

"And yet they insist upon the right to dispense their own medicines. And cut the profits of the Syndicate! Awful!

"Why don't you ask them by what right they are shielding crimes in our hospitals?" If Mr. Engelhard knows of any crimes it is his duty to take his testimony to the District Attorney. If he doesn't he is merely a slanderer and libeler. Come; out with it. What do you know?

"Why don't you go before the legislatures and point out that the only men who are the concrete fighters against pure foods and medicines are the men back of the bills through which they attempt to slaughter your industry?" Said 'industry' being the purveying of sure cures for consumption, cancer, diabetes, and the manufacture of lost manhood hypochohdiacs. All these fakes and scoundrels are promised the support of the retail druggists if only the latter are secured a sufficient profit on the 'business.'

The remedy for this sad state of affairs where two thirds of the medicines given do not pay the druggist a profit, is legislation. Make the doctor quit dispensing. If he does dispense, and the patient dies, let the coroner alone give the certificate. This should stop the ruthless murder of confiding patients that seems in Mr. Engelhard's mind to be so common a pastime with us. If the doctor prescribes make him furnish the patient a copy of the prescription. It will do the patient so much good; he will know so much about the remedies. But then he may sell them to the Druggist Syndicate men.

Why not treat this farrago of abusive nonsense with the contempt it merits? Simply because the organized druggists are pushing to have this view of the matter placed on the statute books of the states; and with some success. The average legis-

lator sees things as the advocates see them. The claim for the exclusive right to dispense strikes him as fairly reasonable until the doctor explains how seriously it would handicap him in his work. Better see the legislator and explain it.

Still better, get busy over our absurd, antiquated system of remuneration for services when the patient is ill and can not pay; and establish ourselves as the family advisers whose principal duty is to keep the people from falling sick, and have our friends pay us a fair salary for such services.

Note:—The quotations are from an address given by Mr. Engelhard before the Proprietary Association in New York, last May.

Editorial News Items.

Dr. A. E. B. Alford, of Greensboro, N. C., is in London doing post-graduate work. He will probably be away about a year.

Dr. S. J. Hawes of Dover, N. C. is attending the New York Postgraduate schools during the summer months.

Surgeon Victor C. B. Means, retired U. S. Navy, formerly of Concord, N. C., died on July 18, 1914 in Washington, D. C. Dr. Means was a native of Concord, N. C. being born May, 18, 1864 and entered the U. S. Navy as Asst. Surgeon 21 years later. In 1908 he was retired on account of ill health. An accomplished gentleman, a skilled medical man, in his passing is dimmed the light of a life that was a source of inspiration as well as pleasure to whose with whom he was intimately in contact.

Dr. J. H. McIntosh, a widely known physician of Columbia, S. C. and a recent President of the South Carolina State Medical Association, while returning from a professional call on foot at 2 A. M. July 21 was shot from ambush and wounded in the abdomen by an unknown man who, after the doctor falling to the ground, made good his escape. Large rewards aggregating in total several thousand dollars, for the arrest and conviction of the would be assassin, have been offered by personal friends of Dr. McIntosh, the contributions coming from different sections of South Carolina as well as from his home city. At the date of July 24 Dr. McIntosh is resting comfortably and apparently all indications point to an early recovery, the examination showing that while penetrating the abdominal cavity the range of the assassin's bullet avoided the infliction of injury to important viscera.

BOOK NOTICES.

The Life and Letters of Nathan Smith, M. B., M. D. By Emily A. Smith, with an introduction by William H. Welch, M. D., LL. D. New Haven: Yale University Press. London: Humphrey Milford Oxford University Press, MDCCCIV. Price \$2.25.

In this little volume no attempt has been made to dilate upon the history of to do more than connect the letters with the various incidents of the life of Dr. Smith by arranging them in chronological order.

Dr. Nathan Smith was practically the founder of the Yale Medical School in the year 1813, for he not only supplied the first lectureships in the Theory and Practice of Physic, of Surgery and of Obstetrics, but, by his own personal application to the Legislature of Connecticut, obtained a grant of twenty thousand dollars to start the medical buildings.

It is related that the first President Dwight was accustomed to give a brief sketch of the events of Nathan Smith's life to the senior class of Yale College "in order to awaken their ambition and to encourage them in surmounting difficulties." His was indeed a life full of useful lessons and we are very grateful to Mrs. Smith for this memorial volume which will help to extend and perpetuate the fame of a great physician, teacher, and builder.

International Clinics. By leading members of the medical profession throughout the world. Edited by Henry W. Catell, A. M., M. D., Philadelphia, Pa., with the collaboration of John A. Witherspoon, M. D., Nashville, Tenn., Sir Wm. Osler, M. D., Oxford, and others. Regular correspondents in Montreat, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume 11. Twenty-fourth Series 1914. Philadelphia and London. J. B. Lippincott Company.

This volume contains six interesting papers on the subject of Diagnosis and Treatment, three on Medicine, eleven on Surgery, two on Obstetrics, and one on Child Welfare. All of them are excellent papers and well prepared. The number of illustrations in this volume is seventy-five.

A Manual of Laboratory Methods. By E. M. Perdue, A. M., M. D., Professor of Bacteriology and Preventive Medicine, Eclectic Medical Univers-

ity, Kansas City, Missouri. Illustrated. Second Edition, Revised and Enlarged. Published by Burton Publishing Company, Medical Publishers, Kansas City, Mo., 1914. Price \$1.50.

In the preparation of the second edition of this book no effort was spared to make it thoroughly modern as well as practical. The method of presentation which commended the first edition to the practicing physician has been followed in the revision.

It contains among others, the Wassermann Reaction and Nogurchi's Modification, methods of staining the *Treponema pallidum*, the culture of tissue in plasma medium, the culture of the lepra bacillus, the phenol coefficient of disinfectants, recent methods for the isolation of the colon group and the identification of the bacillus typhosus, the examination of feces for the diagnosis of the hookworm disease, and the method of Viola for the examination of the blood in cases of helminthiasis.

Hydrotherapy for Students and Practitioners of Medicine. Embodying a Consideration of the Scientific Basis, Technique and Therapeutics of Hydrotherapy and some Allied Branches of Physiologic Therapy. By George Knapp Abbott, A. B., M. D., Dean of Faculty and Professor of Physiologic Therapy and Practice of Medicine in The College of Medical Evangelists, Superintendent of The Loma Linda Hospital. Second Edition, Revised and Enlarged with 128 illustrations. The College Press. Loma Linda, Cal.

Much new matter has been added to the second edition of this volume. Among the new sections might be mentioned a chapter on Insanity and Drug Addictions, a section on Prescription Writing and Treatment Combinations, and one on Hydrotherapeutic Apparatus and Treatment Rooms. Many of the new illustrations were prepared in the Laboratory of Physiologic Therapy of the College of Medical Evangelists and in The Loma Linda Hospital.

The publishers have spared no pains to make this book as attractive as possible. It is printed on fine paper, beautifully bound, and the many illustrations are excellent.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A. M., D. D., Professor of Physical Diagnosis in the

Northwestern University Medical School. Roger T. Vaughan, Ph. B., M. D. Volume 1. General Medicine. Edited by Frank Billings, M. S., M. D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A. M., M. D., Professor of Medicine, Illinois Post-Graduate Medical School. Series 1914. Chicago: The Year Book Publishers, 327 S. LaSalle Street.

This series of books is issued at about monthly intervals and covers the entire field of medicine and surgery, each volume being complete for the year prior to its publication on the subject of which it treats. The series is published primarily for the general practitioner but at the same time the arrangement in several volumes enables those interested in special subjects to buy only the parts they desire. Price of this volume \$1.50. Price of the series of ten volumes \$10.00.

The subject matter of this volume we find divided into four main heads as follows: Infectious Diseases, Diseases of the Lungs, Diseases of the Heart, Diseases of the Blood Vessels, Diseases of the Blood and Blood-Making Organs, Ductless Glands, Metabolic Diseases, The Urine and Diseases of the Kidneys.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Roger T. Vaughan, Ph. B., M. D. Volume 11. General Surgery. Edited by John B. Murphy, A. M., M. D., LL. D., F. R. C. S., England (Hon.) F. A. C. S., President of Inter-F. A. C. S., President of the International Surgical Congress, London; Professor of Surgery in the Northwestern University; Attending Surgeon and Chief of Staff of Mercy Hospital and Columbus Hospital; Consulting Surgeon to Cook County Hospital and Alexian Brothers Hospital, Chicago. Series 1914. Chicago: The Year Book Publishers, 327 S. LaSalle Street.

In this year's review we notice that a great variety of methods of anesthesia and analgesia are reported, and a goodly number of cases recorded in each with fairly satisfactory results. The

greatest change is noticed in the general trend of the medical profession toward the production of specific medication in many diseases. Two or three decades ago the efforts of the profession were directed towards the etiologic and pathologic phases of disease and it was indeed considered almost mediocre to mention the medication of disease, while today the most strenuous efforts are exerted toward the discovery of the chemical, chemico-biologic and biologic means of treatment. Striking examples of these are the specific uses of the arsenical preparations and emetin the alkaloid from ipecacuanha as a specific for amebic dysentery and embic abscesses, as well as crocin the glucoside from saffron, allantoin, etc. The discovery of the diphtheroid bacillus as the etiologic factor of Hodgkin's disease is worthy of more than passing notice, and the results of the autogenous vaccine from its culture have been most gratifying and bid fair for its permanent cure.

Price of this volume \$2.00. Price of the series of ten volumes \$10.00.

The Mental Health of the School Child.

The Psycho-Educational Clinic in Relation to Child Welfare. Contributions to a New Science of Orthophrenics and Orthosomatics. By J. E. Wallace Wallin, Ph. D., Professor of Clinical Psychology and Director of Psycho-Educational Clinic, School of Education, University of Pittsburgh, Director-Elect of Psycho-Educational Clinic St. Louis Public Schools. New Haven: Yale University Press. London: Humphrey Milford Oxford University Press, MDCCCXIV.

It is now generally recognized that many of the most vexatious problems in our present-day social economy are somehow bound up with the mental and educational abnormalities of childhood. Educators, physicians, sociologists, penologists, criminologists, lawyers, clergymen philanthropists and parents, criminologists, lawyers, clergymen, philanthropists and parents, therefore, welcome any attempt to gain deeper scientific insight into the nature, extent and causes of the mental, moral and educational arrest, deviation or deficiency of children. The papers included in this collection show in slight measure the aid which the practical psychologists and expert educational consultants hope to render in the important work of diagnosing, identifying, studying and train-

ing feeble-minded, backward and mentally abnormal children in the schools. Most of the chapters of the book are reprinted, with the permission of the editors, from various periodicals. Some of them, however, have been so completely revised that they constitute, in effect, new contributions, while the new chapters added contain important data which has recently been gathered at first-hand and which is nowhere else available.

Dr. Wallin has made a careful and prolonged investigation of the child mind and in this volume gives us his conclusions which are based on statistical study. Realizing such deficiencies as actually exist, he has set about to define the most effective means of correcting them. The book contains tables which will be of the greatest service to all interested in the improvement of the conditions of children. Price \$2.00.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Roger T. Vaughan, Ph. B., M. D. Volume III. The Eye, Ear, Nose and Throat. Edited by Casey A. Wood, C. M., M. D., D. C. L., Albert H. Andrews, M. D., William L. Ballenger, M. D. Series 1914. Chicago: The Year Book Publishers, 327 S. LaSalle Street.

During the past year, largely in consequence of the visit to America of Lieut.-Col. Elliott and of his activities while in this country, the ever-interesting subject of "glaucoma and its treatment" attracted much attention. A corresponding amount of literary material was, in consequence, published in connection with the subject, and there can be no doubt but that trephining and its allied procedures, especially the sclerectomy of Lagrange, constitute a decided advance in the relief and cure of glaucoma—especially of the chronic forms—and some space is given to the matter in this volume. It is useful and interesting in every respect.

This is the third volume of the 1914 series of Practical Medicine and of course it is published in the same manner as the others. The price of this volume is \$1.50.

Medical and Surgical Reports of the Episcopal Hospital, Philadelphia. Vol-

ume II. Philadelphia: Press of Wm. J. Dornan, 1914.

This volume has been edited by Dr. Astley P. C. Ashhurst. It is bound very neatly and appropriately and the arrangement is excellent as are the papers and the various illustrations. By a careful perusal of the volume much valuable information may be gained concerning this magnificent institution.

Abstracts of the Leading articles of the month.

Nature of Old Age and of Cancer.—Gilford (British Medical Journal) regards the development of the human body as a whole, or of any portion of the body, as describing a curve which ascends from the time of the union of the two genetic elements to a maximum at which there is the greatest development of specialization in function and the least in the general characters, such as those of multiplication. The curve then begins to descend with a gradual and progressive loss of differentiation in form and function and an increasing tendency of certain cells to multiply. Decay of certain cells during advancing age leads to their becoming bodies foreign to their host, and this, in turn, calls forth the phagocytes, which, walling off the foreign body, become themselves transformed into fibrotic tissue. The three characters of old age are, decay, fibrosis, and proliferation of non-specialized cells. As the more specialized cells retrogress with a loss of specialization they take on an increased tendency to multiplication. "Reversion is the keynote of the proliferation of old age wherever it occurs." Granting the foregoing statements regarding the anatomy and biology of old age as being true, Gilford believes that we can explain cancer in terms of senility. He says: "Thus, the typical cancer is made up of a collection of cells native to the part, but of more embryonic type, and these cells are surrounded by collections of round indifferent cells derived from fibrous tissue and from other low class structures, such as endothelium and leucocytes. The fibrous tissue, moreover, is often increased, as it is in the senile organ. These changes may be interpreted as follows. Certain somatic cells become aged while the tissues around them are still in a state of comparative youth. They express their senility by returning to a more embryonic form, and as they do so they increase in number, the faculty of multiplication being one of the manifestations of

regression. But as this qualitative change takes place they become alien to their surroundings, and, as foreigners or rebels, stimulate into action the mechanism of phagocytosis. Not only is there an incursion of lymphocytes into the parts, but the connective tissue and endothelial cells in their vicinity revert to their embryonic state and begin the work of phagocytosis. But, as a fact, they have to deal with neither the effete products of molecular degeneration nor with an inert foreign body, for though virtually strangers, cancer cells are by no means inactive. Hence, the attack is abortive, except in so far as the phagocytes, by forming new fibrous tissue, tend mechanically to limit the proliferation of the cancer cells. For, in the meantime, the fixed connective tissue cells are themselves rapidly proliferating, with the result that when they cease their activity and return to their resting stage groups of cancer cells are cut off by intersecting bundles of fibrous tissue, while the whole mass is surrounded by an incomplete capsule of the same structure. This tends to limit the encroachment of the growing cancer, and were it not for the lymph spaces or capillaries, which are the gaps through which the growing cells escape, no doubt the limitation and strangulation of cancers would occur far more often than they do. It will be noticed that the more nearly the cells of a cancer approach the embryonic state the more rapid will be the growth, the less opportunity for fibrosis, the more malignant the cancer." Gilford maintains for this theory that it is satisfactory, based as it is upon facts reasonably interpreted, and that it covers all of the ground.

Urinary Antiseptics.—Jordan (British Medical Journal) reports the results of his investigation undertaken under the auspices of the British Medical Association. The work was experimental, the effect of chemical reaction and of various drugs upon urinary putrefaction and upon the growth of selected microorganism in the urine being observed *in vitro*. The following practical conclusions are drawn:

1. The acidity of the urine is readily increased to an extent of more than double the normal by acid sodium phosphate, average dosage gr. 15 t. i. d., and to a less extent by benzoates. With large doses of citrates it is easily rendered alkaline, e. g., sodium citrate gr. 30 t. i. d.

2. Putrefaction of the urine and the growth of the staphylococcus is aided by alkalinity and delayed by acidity in proportion to the amount thereof. The reverse is

true with *B. coli*, but only to a small extent, its growth in both acid and alkaline urines being quite luxuriant.

3. Hexamethylenetetramine (urotropin) is not itself antiseptic, but acts by producing formaldehyde in the urine. This takes place only in acid urine, the yield of formaldehyde, and, therefore, the degree of antiseptic power, being proportionate to acidity. This drug is by far the most efficient of all the urinary antiseptics.

4. Helmitol, citramine, hetraline and systopurin, though they precisely like urotropine in the urine, having no antiseptic power in alkaline urine.

5. Sandalwood oil, though not an efficient general urinary antiseptic, seems to have a specific action on the staphylococcus, which possibly accounts for its reputed favorable action in gonorrhea.

6. Benzoic and salicylic acids are fairly efficient urinary antiseptics, but of little use in alkaline urine.

7. Boric acid acts efficiently; its action being unaffected by alkalinity. It is the most efficient drug in alkaline urine we possess.

8. *Uva ursi* is quite a good antiseptic. Its action is certainly not due chiefly to the arbutin it contains.

Calcium and Iodine in Pneumonia.—Barr, in *The British Medical Journal*. Among the many good things in this paper deserving pondering over is his statement that the lime salts are the best remedy to limit the spread of this disease. James declares that, in the acute stages of pneumonia, the more scanty and the more sticky the expectoration, the more viscid the blood and the more lime salts and leukocytes it contains, the more favorable the prognosis.

On the other hand, if the blood is fluid, the expectorate hemorrhagic, and the calcium salts and leukocytes are scanty, the prognosis is poor. This being so, the free use of calcium is advised; such a course also aiding in the maintenance of cardiac contraction and muscular tone.

In all febrile conditions, the blood rapidly parts with its calcium, and in such conditions it is essential that this element be restored. An examination of the urine serves as a good indicator, with regard to the calcium metabolism. If the physician finds the calcium salts deficient in the urine and albumin present, he may safely conclude that both the free and the fixed calcium salts in the blood are deficient; and the sooner they are replenished, the better.

The moral of these observations is, that calcium should be prescribed more freely. Various calcium salts are recommended,

among them the lactate, the chloride, and the carbonate; but we were particularly interested to learn that Barr has had especially good results in pneumonia with calcium iodide and tincture of iodine, particularly in cases of pneumonia complicating bronchial asthma. Possibly his hypothesis will help to explain the highly satisfactory action of iodized calcium, in the treatment of pneumonia, as reported by many contributors to this journal.

Dr. Barr is also a believer in the use of vaccines, especially as a prophylactic and also during the stage of resolution. The calcium iodide is also employed by him during the stage of resolution, with good results. Heart weakness he combats with strychnine, caffeine, digitalis, and, in extreme cases, with intravenous injections of strophanthin. The temperature is reduced by applications of the ice-bag to the abdomen, while reflex stimulation is secured by means of mustard poultices applied to the affected side. In troublesome cases of insomnia, he not infrequently secures rest for the patient by the use of hyoscyne, morphine, and atrophine.

As regards diet, Barr claims good results from the use of glucose or syrup of glucose and sugar of milk. Milk is an excellent food, but is not always well digested, and, accordingly, should be well diluted when given.

Vaccines from the Standpoint of the Physician.—Horder, in the *London Lancet*, believes that the growing popularity of vaccine therapy is not an indication of its utility, but, rather, is due to desire on the part of the doctor not to be left behind, and to demand for vaccine treatment on the part of patients. He argues strongly against the use of any but autogenous vaccines, and especially inveighs against mixed vaccines, the use of which, he says, is quite as bad as failure to make a correct bacteriological diagnosis. This latter he considers the crucial point in the use of vaccines. Diagnosis cannot be made without the greatest care and the co-operation of a competent bacteriologist. It must be borne in mind that all other factors available for treatment of the patient must be employed along with the vaccines. Of these, perhaps the most important are securing and maintenance of free drainage, and the raising of the patient's general health.

B. Coli in the Puerperium.—Simpson and Bernstein (*British Medical Journal*) state that the possibility of autogenous infection is now well recognized. Bacteria which normally inhabit certain parts of the

body as saprophytes can, under favorable conditions of environment, acquire virulent characters, so that one finds the streptococcus or the *B. coli* or the *B. procyanus* at times settling down on a diseased endocardium or kidney or other part of the urinary tract and initiating pathological processes.

It may be granted that the organisms are constantly entering the blood stream in some numbers, but under ordinary conditions of health are easily overcome by the defensive agents. But sometimes these bacteria may settle down to a saprophytic existence in parts of the body usually free from them, so that it is possible for the *B. coli* to live in the female bladder for long periods without producing any disturbance.

Where there exists disease of the bladder or the kidneys the manifestations are fever of indefinite duration, often rigors, and invariably the urine is of high acidity, containing pus and swarming with bacilli. The urine is so acid as to produce scalding in passage. Though the pyrexia may continue for some time, the patient does not manifest general symptoms of such severity as are met with in septicemia; nor can micro-organisms be found in the blood stream by cultural methods. The condition is one of toxemia. There is but slight leucocytosis. There is but slight leucocytosis, though in more extensive disease of the kidneys, where abscess formation is advanced, this may be more marked.

The results of treatment may be summarized under three groups: (1) Cure may result and the bacilli disappear from the urinary tract; (2) the symptoms may be relieved and the bacilli disappear so long as the patient is kept under treatment, but it will be necessary to give prophylactic doses of vaccines at increasing intervals of time; or (3) the condition may subside and the bacteria continue to inhabit the bladder as harmless saprophytes. The result of vaccine treatment is, as a rule, rapid, and even after the first dose the temperature may even fall and the toxic symptoms be relieved, while the bacteria may disappear from the urine. But even so, one must be guarded in giving prognosis of rapid return to health or in discontinuing the treatment too soon; for, though it is easy to control the bacterial activity, in some cases it is difficult and occasionally impossible to entirely inhibit them. Consequently, the vaccines should be continued in increasing doses at increasing intervals of time for several weeks and the further treatment should be controlled by periodic examinations of the urine.

Vaccines in Bronchitis and Asthma.—Pire (British Medical Journal) says that vaccine therapy holds out very considerable hope of effecting improvement in chronic bronchitis even in cases which have proved resistant to other modes of treatment, but—and there is always a but—it can not be said to be certain of doing so, and in all cases it should be made clear to the patient at the outset that fairly long continued or repeated courses of inoculation are likely to be necessary to obtain good and lasting results. The average length of time for which his sixteen cases were under treatment, constantly or intermittently, was nine and a half months.

The doctor advises any patient, even when supposed to be cured, to have occasionally a few protective inoculations against any organisms to which he is specially sensitive, and more especially before the onset of winter. For this purpose either an autogenous vaccine might be employed, or one of the several so-called "combined vaccines for colds" which are on the market, and which aim at producing immunity against all of the commoner cold-causing germs. The writer has no personal experience of the use of these, but one objection which they seem open to is that few of them are suited in their composition to the infections which are most common at any one time.

The dosage of the vaccines employed has varied considerably in the different cases, but the general tendency has been to increase the amounts given, pushing the dose in each individual case until one is arrived at which produces after inoculation some definite reaction in the way of general discomfort, slight feverishness usually, and not infrequently some temporary aggravation in the amount of the bronchial secretion.

Vaccine treatment is not, of course, recommended to the exclusion of other measures, but simply as an "extra" where these fail to give satisfactory relief. The ordinary medicinal and hygienic measures applicable should be employed, and, in particular, he considers it highly important to cleanse the nose and nasopharynx at least twice daily with some form of douche and swab to remove mechanically at least some of the offending organisms which are constantly lurking in these situations, ready to infect the lower respiratory passages when given a suitable opportunity.

Dyspnea.—Groher (Deut. Med. Woch.) contributes an article, the tenth of the series, on sudden threatening conditions confronting the physician who has no pre-

vious knowledge of the patient. No matter how pressing the danger in dyspnea, the physician must give to it a brief study before applying symptomatic treatment. Removal of the cause must be the first consideration. Examine the throat directly, by laryngoscope, and finger, keeping in mind infection from diphtheria through a bite. The finger may discover retro-pharyngeal abscesses, edema of glottis or spasm of vocal cords, while the finger may cause by retching the expulsion of false membrane, foreign body, etc. If the dyspnea comes from pleuritic effusion or pneumothorax puncture. If of cardio-vascular origin, intravenous injection of digitalis; in anemia, oxygen or transfusion of blood. In venous congestion, venesection. If secretions in the bronchial tubes, ipecac or antimony and potassium tartrate in not too small doses every ten minutes may be needed. Cooling baths followed by a cool douche has an excellent expectorating effect, acting especially on the finer ramifications. In very severe attacks, narcotics. In frightened patients, the physicians suggestions for deep breathing help, as well as cold applications to the chest, rubbing, etc.

Causes of Insanity.—Mott in the London Lancet notes that the discovery of spirochetes in 12 out of 70 brains of general paralytics, has dispelled any doubt as to syphilis being the essential cause of this disease. Of the total admissions to the asylums of the County of London every year about 10 per cent. are general paralytics. The principal causes of mental deficiency may be summed up in the fact that as regards the functions of the organ of mind, "like tends to beget like." Mentally defective children, particularly if more than one occurs in a family are usually the offspring of parents who are imbecile or of low grade mentality. The causes of the psychoses or true insanity in which so far no adequate explanation by morphological changes in the brain exists, fall into two groups: (1) the toxic, and (2) the degenerative (neuropathic), but the two conditions are more often than not combined. The toxic causes are (a) exogenous, and (b) endogenous. The characteristic true alcoholic psychosis regarded by Kraepelin as chronic delirium tremens is not a common class of case in the asylums, although alcoholism plays an important part in the degeneracy of a stock. The neuropathic inheritance and dominant part in the causation of the true insanities. There is a marked correlation between the age at onset of insanity and the critical periods of

sexual life. It is an interesting fact that in certain types of insanity, especially the primary dementia of adolescence, there occur in quite young females a great diminution of ova, signs of absence of maturation of the ova, and marked fibrosis of the gland. The author considers this to be further evidence of anticipation, by which the children of insane parents are affected at a much earlier age than the parents and in a more intense form. Modern social conditions tend to repress or suppress the natural physiological gratification of the sexual passion especially in women. Its suppression is one of the causes of insanity, especially in subjects with the neuropathic taint, for it tends to continued mental depression and the development of an anxiety-neurosis which in its turn leads to a disorder of the vital functions and a disturbance of the bio-chemical relations of the whole body, causing an auto-intoxication. Thus a vicious circle may be established by the interaction of a disordered mind and a disordered body. Dementia præcox is evidence in most cases of an ancestral neuropathic taint. Up to the time of puberty the majority of patients affected by dementia præcox have been intelligent individuals and full of promise. There is not a congenital feeble-mindedness but some germinal defect, possibly of durability of the sexual glands, which has a profound influence on the function of the brain, causing at first mental disorder and finally dementia.

The Rational Treatment of Chronic Bacillary Dysentery.—(Rogers.) Acute bacillary dysentery is essentially an inflammation of the mucous membrane of the large bowel, and the causative organisms are limited to the intestinal tract, except in a very few acute instances in which they invade the blood stream. In early cases the serum and saline treatments are usually effective in dealing with the toxemia and congestion of the mucous membrane, and commonly subdue the disease before much lasting damage has been done.

In chronic bacillary dysentery the author has found that saline treatment does more harm than good and he has not had good results from stock *Shiga bacillus* vaccines. The treatment of chronic bacillary dysentery is in a very unsatisfactory state at the present time.

In examination after death from chronic bacillary dysentery—including in that category all those in which the edisease has lasted from one month up to a year or more—the lesions are nearly always limited to the lower portions of the large in-

testine, and in the exceptional cases in which they extend above the descending colon they are comparatively slight in the upper part, although they involve the whole of the mucous membrane of the lower half of the large gut. The character of the lesions is quite different from that of cases in which death has taken place in the early acute stages of the disease. In the chronic cases, extensive depressed, and often ser-piginous ulcers are found on a generally thickened bowel wall, with small islets of remaining mucous membrane between them, which as a rule no longer shows the acute fibrinous deposits of the early stages. But little can be expected from medicines given by the mouth, except perhaps from large doses of bismuth, some of which might help to coat and protect the ulcer.

One of the most frequently used and effective of rectal medication is silver nitrate. There are two disadvantages in practice, it is precipitated by both chlorides and albuminous substances, so that its action is very uncertain, and when used in sufficient strength to be likely to exert marked antiseptic and astringent properties, in the presence of salts and albumin, it is apt to be very painful.

It would appear from the tests described that allargin (silver gelatose) was the best of the silver compounds tested, being closely followed by nargol and protargol, while cyllin, iodine, and izal were the most active of the other antiseptics tested.

The main object of this communication is to draw attention to the principle that medicated enemata are clearly indicated in the treatment of chronic bacillary dysentery, owing to the lesions being usually limited to the lower half of the large intestine, and consequently easily reached by bowel washes.—British Medical Journal.

The Operative Treatment of Hemorrhoids.—Anderson considers the ligature, clamp and cautery, and the Whitehead methods.

With regard to the choice of method the author believes that this should not be decided on until the sphincters are stretched and the hemorrhoidal condition reviewed. The ligature method is most generally applicable, and is very easily and quickly performed. It is especially suited for cases of three, four, or five piles, especially the mixed variety, when the external and internal piles can be removed at the one time. Very little blood is lost during the operation, and the after-pain can be controlled by morphine, whilst tag formation usually subsides later; or, if they are large, they can be removed under local anesthesia

later. This method is the one to employ if any complication, such as fissure or fistula, be present. A patient can usually return to work six or eight weeks after operation.

The clamp and cautery operation is certainly the least painful; there is never any fear of stenosis afterwards, and if properly performed there should be no danger of recurrent hemorrhage. It is not suitable when external piles are present as well, or when a fissure or fistula complicates the case. It is especially suitable for cases of not more than three piles of the internal variety, and when there is no redundant anal skin or tags present. It is a bloodless method, and suitable for very anemic cases, and as it is the least painful method, time is an important question, this method should be used, as the period of convalescence is considerably shortened. If the surgeon should be unable to see his patient again, he need have no fear of subsequent stenosis after the clamp and cautery method.

The Whitehead method should be reserved for the following cases:

(a) Where there is a general hemorrhoidal condition involving the whole circumference of the ano-rectum, and especially if there is extensive thrombosis or a considerable extent of prolapse.

(b) In cases where, though the piles may not be large, there is a pathological condition present which may be described as a prefissure or prefistula state. In this condition the anal valves are enlarged, and little blind submucous pockets may be found running upwards or downwards from the line of anal valves. These may have their mouths occluded and act like little incubating chambers, and are undoubtedly in many cases the starting point of fistula; whilst, if Ball's theory be accepted, enlarged anal valves lend themselves to the formation of fissure.

Whitehead's method removes this danger zone as well as the hemorrhoids.

This method should not be employed in all cases of hemorrhoids, but is well suited for the conditions mentioned above. If the after-treatment is properly carried out, stenosis should not occur.—The British Medical Journal.

Auto-Intoxication and Subinfection.—Adami believes that it is more rational to regard the evil effects of intestinal stasis as, in the main, a result of conditions favoring subinfection and low forms of infection than as a result of chronic intoxication. The term "gastro-intestinal auto-intoxication" is pernicious and not to be employed by any self-respecting member of

the profession, save for so limited a set of conditions that for ordinary purposes it may safely be expunged from the medical vocabulary. While he regards it as being possible that the symptoms and diseases enumerated by Lane may follow intestinal stasis, he is convinced at least a large proportion of them may originate independently of such stasis. Before recommending the operation of short-circuiting it is necessary, therefore, to make the fullest studies, so as to discover, if possible, the nature of the organism responsible for the disturbance and its probable seat of entry. A discovery of the cause of the symptoms is calculated to suggest the appropriate means of treatment by means other than short-circuiting. Only when these have been tried and found wanting is removal or short-circuiting of the colon justifiable.—British Medical Journal, London.

Chronic Intestinal Stasis.—Pringle divides the treatment of chronic intestinal stasis into (1) prophylactic, (2) medical, (3) local operative, (4) radical operative. He advises under these heads the proper development of the abdominal muscles by suitable exercises; the acquiring in early life of a regular habit of emptying the bowels and the avoidance of the routine use of aperients; the use of an abdominal belt, and the internal administration of paraffin in doses of 1 to 4 dams, three times a day, in the form of liquid paraffin (B. P.) flavored with one of the essential oils, such as cinnamon or peppermint.

In midline ptosis he, as a rule, performs Rovsing's gastropexy, together with shortening of the gastrohepatic and gastrocolic omenta, but in some cases he has employed Coffey's omentipexy. If the liver has prolapsed and would endanger the success of the gastropexy, he first fixes it up by shortening the falciform ligament and suturing the free edge of the liver to the anterior parietal peritoneum. If the upper abdomen is very contracted he has enlarged it after the manner advocated by Coffey and Rovsing. Should the splenic flexure be slung very high, he divides the costo-colic ligament and opens up the angle by suturing the descending colon to the left lateral abdominal wall after dividing any adhesions which might bind the two limbs of the angle together.

In kinking at the duodeno-jejunal junction he fixes the jejunum to the under-surface of the transverse mesocolon in such a way as to open out the angle; in other words, he reproduces the mesocolic band. For Lane's ileal kink he divides the band parallel to the line of the bowel and su-

tures the resultant rent vertically, employing, if necessary, an omental graft to assist in covering in the raw area. In mobile dilated cecum unassociated with Jackson's membrane he has employed many methods of fixation, and has also enfolded it in cases of marked dilatation. Recently, however, he has used the method of Coffey. If a mobile cecum is associated with Jackson's membrane, he divides this prior to fixation. When Jackson's membrane is found without ptosis of the cecum, but constricting the colon, he merely divides the membrane, and if any raw surface is left, which occurs in cases of secondary inflammatory thickening, he uses an omental graft to prevent adhesion formation.

If a double-barreled colon be present, or if the bands in the neighborhood of the hepatic flexure are very dense, and likely to recur, Pringle does a lateral anastomosis between the cecum and the transverse colon, or—and he thinks this the better procedure—excises the cecum, ascending and right half of the transverse colon, and restores the continuity of the transverse colon. In all cases of trouble in the cecal region he also removes the appendix. Where the last or sigmoid kink is causing trouble he divides the shortened leaf of the mesentery transversely and sutures it vertically. The radical procedures Pringle reserves, short-circuiting and colectomy, for the cases in which multiple conservative operations would not be effective, or in which the length or time necessary for their performance would endanger the life of the patient. His opinion is that ileocolostomy is not a good surgical procedure, and he believes that where conservative operations are contra-indicated the best operations is complete colectomy.—*British Medical Journal*,

Veronal Poisoning.—Russell and Parker (*British Medical Journal*.) first saw their patient after he had become unconscious. He was deeply comatose, all means to arouse him failed, the pupils were small, reacted to light, and subsequently became somewhat dilated. The extremities were flaccid, but not paralyzed. No reflexes could be obtained. His color was natural, the skin moist; there was about one degree of fever, the pulse was regular and somewhat rapid, and the blood pressure was not high; the lungs were normal, except for the accumulation of bronchial fluid. Death ensued, without return to consciousness, after a period of three days. Postmortem examination showed nothing characteristic. By the method of Willcox veronal was isolated from the urine, 0.31

gram being obtained in crystalline form, 0.0235 gram from the viscera, and 0.0385 gram from the brain. The authors estimate that about fifty grains of the drug must have been taken. A second case is reported by Munro of a healthy young woman, twenty years old, who took 125 grains at once with suicidal intent. Her symptoms were closely similar to those described in the previous case, but lavage and treatment with coffee and strychnine led to recovery after a period of unconsciousness lasting three and a half days. From one ounce of urine, withdrawn forty eight hours after the drug was taken, Munro isolated twenty five mgm. of purified crystalline residue, which was shown to be veronal. The case is remarkable for recovery after so large a dose. The author cites a number of other cases from the literature to show the variability of the fatal dose, so little as fifteen grains having proved fatal in at least one case. A third case is reported by Dick, ending in recovery after a dose of thirty five grains.

Smallpox in Infants and Children.—

Henna (*British Journal of children's Diseases*.) Smallpox in an unvaccinated community is essentially a disease of children, the mortality in children under the age of five years reaching on an average to 9 per cent. of the total annual deaths of the entire population. Where vaccination is compulsory and well carried out, however, adults are more frequently affected, and the mortality up to the age of 15 years is nil. For symptoms the intense headache and loin pain of the adult are replaced by drowsiness, stupor, coma or convulsions. Prodromal rashes, erythematous and hæmorrhagic, are less common in children. Neither the "shottness" nor "umbilication" of the typical rash are absolutely diagnostic, as "shottness" may not appear, and "umbilication" occurs also in varicella. The relative distribution of the rash is the chief diagnostic point in smallpox, and this must be particularly emphasised. Smallpox also occurs concurrently with vaccination, where the affected pregnant mother gives birth to her child in hospital, the infant being vaccinated at birth, but too late to prevent the disease developing, and amongst the vaccinated contacts of a household affected by the disease. If vaccination is preformed soon enough, within three days of infection, it almost entirely neutralises the disease, and the later the vaccination the more severe the type. When symptoms have appeared, the vaccination does not "take." Diagnosis is often difficult. In the early stage the disease may

simulate influenza, lumbago, or an acute febrile attack. In the prodromal rash stage, scarlet fever and purpura hemorrhagica are to be differentiated. The early smallpox rash resembles measles but symptoms and onset are different. In the vesicular stage varicella may easily mislead.

The Operative Treatment of Fractures.

—Groves (British Journal of Surgery) gives an account of some experimental work designed to throw light on the pathology and results of operative fixation of fractures. The experiments were made chiefly on cats, and his conclusions are as follows: (1) The most rapid and perfect method of fracture repair follows "indirect fixation," namely, fixation which does not directly interfere with the area of fracture. (2) For such perfect results to be obtained by "indirect fixation" it is necessary for the method to ensure (a) perfect anatomical restoration. (b) fixation for the period required for union, and (c) perfect freedom of all the soft parts and joints, so that the limb can be used directly the pain has ceased. (3) In all complete fractures there exists a very strong force which tends to displace the fragments until the muscles are thrown out of action, and a position of stability free from tension is required. This involves great deformity, consisting of shortening, overlapping, and angulation. (4) The operative treatment of fractures should aim at completely counteracting this displacing force. It should not only accurately replace the fragment, but do so in a manner of such mechanical efficiency that displacement cannot occur. (5) The mere presence of an aseptic indifferent body in the tissues has no ill-effect upon healing tissues, unless there is an interposition of its substance between the structures, which ought to unite. (6) The frictional grip between a bone and a screw will rapidly give way if subjected to too much tension, owing to the absorption of the bone. (7) The union of bone by plates and short screw is mechanically inefficient, because the screws are quickly pulled out of the bones. (8) Sepsis is often the result, and not the cause, of inefficient mechanical fixation. (9) Mechanical efficiency in the direct operative treatment of fractures can be attained in two ways: (a) by the use of long plates and pins or bolts, which transfix and hold the bone by some broad flange or nut; and (b) strong solid intra-medullary pegs. (10) Perfect anatomical union and normal function usually result from either of the above methods. Normal, sound, and rapid repair is perfectly consistent with absolute

rigidity. (11) Delay in union is a possible, though exceptional, result of perfect operative fixation of a fracture. It is due, probably, to interference with the blood supply of the bone ends, and will cause no disadvantage if the mechanical fixation be so efficient as to hold the bones in good position for an indefinite time. (12) The fixation of transverse or slightly oblique fracture by encircling wire is unsatisfactory, because it is mechanically inefficient, and allows from the outset a mobility which delays union by interfering with the zone of repair. (13) All forms of absorbable pegs that I have tried are unsatisfactory, because they either break or bend before good union has occurred. (14) Metallic magnesium, when used as a peg, acts as a powerful stimulus to callus formation. (15) The natural position assumed by bones which are not fixed, results in deformity, callus excess, or the formation of a false joint. (16) In the treatment of severely comminuted fractures, and in certain cases of open fracture, the best method of treatment is by a fixation of the main fragments, leaving the small pieces in position when strength of union is the chief object, and removing some of them when callus excess is likely to interfere with the mobility of a joint. (17) In the repair of bone defects; (a) natural repair occurs rapidly when any part of the thickness of bone is destroyed; (b) fragments of bone used as a graft (from the same animal) forms new bone very slowly if they are only loosely inserted in the gap; (c) large pieces of bone used as a graft unite quickly, and form the center of new bone growth, if they are tightly fixed to the raw surfaces of vascular bone. (18) The periosteum is the product, not the mother of bone. All the osteogenetic properties of the periosteum, whether in the repair of fractures or in grafting are due to the more or less accidental presence of the outer layer of bone cells adherent to its deep surface. (19) Living bone is the chief source and origin of callus, which grows mainly from its outer or periosteal surface, and to a less extent from its deep or medullary surface and its cut ends. (20) Cartilage is a constant stage in the transformation of bone-granulation tissue into bone. It is present chiefly (a) in early stages of repair, and (b) where there is much displacement and mobility, and it remains longest under the periosteum and at the time of the fracture.



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Miscellaneous.

Pituitrin as an Ecboic.

Pituitrin exerts a more pronounced oxytocic action in multiparæ than primiparæ. Its administration seems to close that gap of time intervening between the true onset of labor and the final stage of delivery, which frequently causes unnecessary loss of time to the ber of 77 cases, 27 were primiparæ and 50 multiparæ. Of the 27 primiparæ, 14 had normal delivery, while in 13 cases forceps were applied. In the 13 cases the pains were increased by the pituitrin to a very marked degree, though not sufficiently to complete labor; 7 of the number were of abnormal presentation. In the 50 multiparæ the pains were markedly increased, with but one exception. Forty-four were delivered in twenty minutes to two hours. In 6 cases forceps were applied, 3 of which were abnormal presentations.

Pituitrin leaves the patient in much better physical condition after labor is completed. The child also seems to be in better general condition. Of the multiparæ very few had after-pains, and where these were present they did not last more than ten to fourteen hours. The author noted that the uterine contractions remain more permanent and the lochia flows quite normally after pituitrin. Since beginning its use, he has entirely discarded ergot and has had but 1 case of hemorrhage, which was controlled promptly by packing the vagina with cotton tampons. This case followed a forceps delivery, and, when it was once controlled, the hemorrhage did not return.

In administering pituitrin it is important to use a fresh preparation. The syringe must be entirely free from other substances, particularly alcohol, which seems to interfere with the drug's action. The author finds that better results follow subcutaneous injection well under the skin in the gluteal region than in the muscles or fatty tissues. It is also important not to give chloroform before the child's head is pressing upon the perineum, as its early administration retards the action of pituitrin, delays labor, and necessitates a second injection. Benson, in *The New Orleans Medical and Surgical Journal*.

Treatment of Malarial in Infants.

W. Weston, of Columbia, S. C., writes that if malaria in infants is seen during the early part of the paroxysm he gives a mustard bath, applies an ice cap to the head, and if the infant is having convulsions

gives sodium bromide and antipyrine. If the infant is in this stage, frequent tepid spongings give great relief. The bowels should be promptly and freely opened by the use of frequent small doses of calomel. Other medicinal treatment consists in the administration of quinine, preferably bisulphate in aqueous solution. The stomach of infants suffering from malaria is almost invariably very irritable, and it is therefore important that quinine should be given only at those times when it will be most effective in destroying the parasites. Weston advises that in benign attacks no quinine be administered for at least three hours after the temperature becomes normal. Then administer 2 grains bisulphate in aqueous solution every two hours, day and night, for twenty-four hours, then 2 grains of the solution every four hours for twenty-four hours, then 3 grains morning and evening for three weeks. It absorbs more readily when the stomach is empty. If difficulty is found in retaining the bisulphate, equinine may be tried for pernicious malaria quinine hypodermically is the only method to be relied on.

The best salt of quinine for injection in Weston's opinion is the bimuriate. The bimuriate of quinine and urea is convenient and reliable and the 3-grain tablets contain about $2\frac{1}{2}$ grains of the quinine salt. The tablet should be dissolved in distilled water or merely sterilized water. The needle and syringe must be sterile and the skin sterilized. The solution is then injected deep into the muscles. This procedure may be repeated every six hours. Finally the rectal administration of quinine may be resorted to. Here the bimuriate in doses three times as large as would be given by the mouth or intra-muscularly should be given in 2 ounces of warm water. This injection should be given high up in the rectum. It is well to add 5 drops of tincture of opium to the solution to prevent tenesmus and aid retention.—*Archives of Pediatrics*.

Case of Osteitis Deformans.

Myers reports the case of a man, aged 57, who came to the Western General Dispensary about a year ago for advice with regard to severe pains in the back and legs. It appeared that he had suffered from pains in various bones and joints for five years. The infected bones included the vertebrae, both femora, especially the left, both tibiae and fibulae, the right radius and ulna, and the skull. The walk of the patient was suggestive of osteitis deformans. He had lost about four or five inches in height since his pains began. The head was bent

forward, evidently on account of the usual dorsocervical kyphosis of this complaint. There was very distinct thickening of the left femur, which also showed an outward and a forward curve. There was some thickening of the left tibia and perhaps the right radius and ulna. The clavicles seemed to be a little enlarged also. The peculiar feature of the case was the apparent want of increase in thickness of the cranial bones. The patient could wear the same hard hats now as formerly. He had arteriosclerosis rather well marked. Pains in the precordial region troubled him occasionally. The appetite was good, the bowels were open daily, the speech was "stuttery" at times, the memory fair, and he slept well. There was no similar case in his family. The urine was normal. The calcium content of his blood was estimated upon two occasions, and each time it was less than normal. The Wassermann test was negative. The diagnosis of osteitis deformans was backed up by the x-ray photographs, the only difficulty being his skull and a rather prominent lower jaw. The latter suggested the possibility of the co-existence of Paget's disease with acromegaly, but an x-ray picture showed a normal sella turcica and nothing abnormal in the inferior maxilla. With regard to treatment, he had taken quinine, iodide of potassium, and nux vomica with no noticeable benefit. For the pain various liniments had been tried, and perhaps had been of some use, but the greatest relief from pain had been obtained from salicylate of sodium, which the patient was still taking in conjunction with tonics.—Proceedings of the Royal Society of Medicine.

Case of Acute Cerebellar Ataxia in an Adult.

Buzzard, reports the case of a woman, aged 38, who gives the following history: When in good health in September, 1910, on a certain day she was seized with shivering and general malaise. This continued until the following Tuesday morning, when she woke up to find herself hardly able to speak, and quite unable to use her arms or legs properly. From that time until the present there has been gradual but slow improvement, so that she is more able to talk clearly and able to use her hands for most purposes. At the same time she is still unable to stand or walk without some support. Present condition: The function of the cranial nerves is normally carried out with the exception that she displays a marked amount of ataxic dysarthria. The strength and sensibility of her arms are perfectly good, and she only displays a slight amount of cerebellar incor-

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ordination when tested severely. The lower extremities are powerful enough, but widely ataxic when she attempts to walk. There appears to be very little impairment of sense of position. There are no nystagmus, no ophthalmoscopic abnormalities, and no organic changes in the reflexes. The patient complains of no giddiness or tinnitus.—Proceedings of the Royal Society of Medicine.

Melubrin.

Melubrin is the sodium salt of a combination of amidomethane sulphonic acid with antipyrin, and possesses chemical properties which suggest better therapeutic results than those obtained from other antipyrin combinations or substitutes. Several authors record their favorable experience of this drug in rheumatism, sciatica, various infective processes, including tuberculosis, and in reducing the lightning pains of tabes dorsalis. Hahn further found that a distinct advantage over other salicylate preparations was that Melubrin could be given intravenously without any untoward symptoms being produced. K. Riedel, (Muench med. Woch., November 4, 1913), has given this substance by the mouth, and by various methods of injection, and has only once seen the slightest toxic symptoms; these, however, were of

short duration. In one case of acute rheumatism, the pain and swelling disappeared after a single intravenous injection of 0.75 gram. But as a rule, much larger and repeated doses are required to attain this effect. He has made the observation that the therapeutic effect is just as good after subcutaneous or intramuscular injections, and now strongly recommends this method as being simpler and less tedious than the intravenous method. He gives from 2 to 3 grams twice or three times daily. He finds it useful also as an antipyretic and antineuralgic. In conclusion, he points out that powder and not tablets must be used for preparing solutions for injection, as the latter contains some starch.—British Medical Journal.

Incurative Little Fingers in an Afro-Aryan Child.

Crookshank reports the case of a female aged three years who had been under treatment for rickets somewhat irregularly during the past fifteen months. When first seen the incurvation of both little fingers were marked. This morphological character, although most often spoken of in connection with mongolism, was really, as had been noted by Keith and others, to be seen in the young of every primitive human race, and of all anthropoids. Its relation to mongolism is therefore general and not peculiar. The patient was the offspring of a male African negro and a female Cingalese, and was therefore without any trace of racial mongolism. A year ago her eyes most resembled those of a negro baby. They are now full, like those of the Cingalese and some other "Aryans."—Proceedings of the Royal Society of Medicine.

State Board Examination Questions of Pennsylvania.

GYNECOLOGY AND OBSTETRICS, PHYSIOLOGICAL CHEMISTRY.

1. Given a pregnant woman, of seven months or more, stricken suddenly with severe hemorrhage, what would be your deductions? Outline the management of the case.

2. State pelvic measurements or other conditions that warrant an interference with the natural progress of gestation or of labor: what procedure would you recommend in each condition noted?

3. Enumerate the conditions that must be considered in excessive or protracted bleeding in a non-pregnant woman: outline surgical operations or methods that may be required, with the reason for selecting each. (Omit details of operation.)

4. If at the third month, a primipara

should engage you to care for her through the period of gestation and labor, give in detail your care of the case, including measurements and tests.

5. What injuries may result to the birth canal from labor? Give in detail the management of a case of normal labor, with a view of preventing such injuries.

6. What is the significance of sudden collapse and shock that might develop during labor? Outline your treatment for such a case. (Omit description of operation.)

7. What breast complications may follow confinement? Outline the care of the breast that would probably prevent such complications? If they should occur, how would you treat them?

8. Indicate the steps in the digestion and absorption of the food substances present in a ham sandwich.

9. Discuss the chemistry of intestinal fermentation and putrefaction.

10. How may blood be detected in the feces, and what is the significance of this finding?

SURGERY AND ANATOMY.

1. Enumerate the constitutional and local conditions that may cause delayed or non-union of bone after a fracture: State two surgical procedures for its correction.

2. Outline the methods of examination by which you would determine the existence of a fracture at the surgical neck of the humerus: what is the usual deformity in this fracture? What is the anatomical explanation?

3. Enumerate the early symptoms that are caused by a typhoid perforation. Outline a surgical operation for the same.

4. State the usual anatomical avenues by which infection reaches the mastoid process. Outline a surgical operation for mastoid abscess.

5. What anatomical structures may be involved in the extension of a bunion? Describe its surgical treatment.

6. Name the varieties of club-foot: outline a surgical operation for the correction of any one form, with the anatomical and mechanical reasons for employment of same.

7. In fracture of both bones at the forearm, the actions of what muscles should be specially considered? What character of splints should be applied?

8. Enumerate symptoms and conditions upon which might be based the diagnosis of a malignant growth of the breast: outline a suitable surgical operation, giving the surgical anatomy of parts.

9. What is the usual position of the fragments in fracture of the patella? what is the anatomical explanation? State, with-

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out details of technique, two methods of phor, (c) cimicifuga, (d) aconite, (e) er-

treatment.
10. Outline the medical treatment in exophthalmic goiter. What symptoms, in your opinion, would indicate the need of surgical intervention?

PRACTICE AND MATERIA MEDICA AND THERAPEUTICS, HYGIENE, AND PREVENTIVE MEDICINE.

1. State the sanitary precautions to be observed in the treatment of scarlatina. What are its possible dangers? Give indications of three remedies that might be used in its treatment.

2. (a) Describe the technique of general anesthesia; (b) Give reasons for the choice of each one of three agents used for this purpose.

3. Give the management and treatment of a well-developed case of follicular tonsillitis.

4. Outline the most important factors in the treatment of a case of incipient tuberculosis.

5. Outline the therapeutic action of (a) santonin (cina, Homeopathic), (b) cam-

phor, (c) cimicifuga, (d) aconite, (e) er-

got.
6. Outline the general medical treatment in exophthalmic goiter. What symptoms, in your opinion, would indicate the need of surgical intervention?

7. Given a case of typhoid fever with hemorrhage, outline the management during the first period of the hemorrhage and post-hemorrhagic stage and state the therapeutic action of each drug used.

8. In the treatment of chronic interstitial nephritis, what dietetic and hygienic suggestions would you make? Name three drugs that might be employed in the treatment of this condition, with the precise reason for the employment of each.

9. What are the main objects accomplished by the scientific ventilation of a school building? What degree of temperature is most conducive to health and mental activity in such buildings.

10. What are the main dangers to be apprehended in raw milk as ordinarily found in the market?

Glioma of the Cerebellum; Recovery After Simple Drainage of Cyst.

Batten reports the case of a girl, aged 8 years, who in November, 1911, complained of headache, attacks of vomiting, and unsteady gait, which she had had for two months. On examination she had double optic neuritis and symptoms pointing to a tumor of the cerebellum, the ataxia being rather more marked on the right than the left side. A subtentorial decompression was performed on November 14 and a cyst containing a yellow fluid, which rapidly clotted, was found in the left lateral lobe. The wall of the cyst was formed of a new growth which infiltrated the lobe of the cerebellum. A small piece of the growth was removed and on microscopical examination showed the appearance of a glioma. The child slowly recovered, and now, two years later, seems quite well.—Proceedings of the Royal Society of Medicine.

Gasoline as a Therapeutic Agent.

Stephens enumerates many uses to which ordinary motor spirit may be put. In pediculosis capitis, it is the remedy par excellence, not only terminating the life of the parasite, but having a good solvent action on the nits as well. As a scalp cleanser it is most valuable; in alopecia areata it has proved useful; in ringworm and in scabies it succeeds where other remedies have failed. Its great penetrating powers, together with its solvent properties, make it useful in many skin affections. Burns of all kinds, and especially those produced by spluttering of hot metal as steel, copper, or spelter works, are greatly benefited by the early application of gasoline. At the authors suggestion, several of the works in his district have a quantity of gasoline ready at hand in a spray, whence it is blown on to the wounds, which are then covered with a dusting powder of iodoform, salicylic acid, and boric acid. Its application by means of a spray tends to the cleanliness of the method, which, in the case of cuts, is of especial value, as it allows of the stitches being put in at the surgery without any further preparation. The value of gasoline in burns is, in the author's opinion, due to the fact that it destroys all germs that have been conveyed from the filthy clothes to the wound, and at the same time interferes with the broken-down, half-burnt skin cells, from which enzymes have been set free. These enzymes, being closely related to ptomaines, are undoubtedly responsible for the poisoning which always takes place in metallic burns, whereby the process of healing is prolonged for weeks. The author adds the necessary word of warning as to the inflammability of this

substance.—Dublin Journal of Medical Science.

The Medicinal Action of Foods.

We find some interesting suggestions as to the therapeutic possibilities of foods. Thus, for instance, according to Buckland, onions, eaten at night, promote sleep, produce perspiration, and have a diuretic action. They are good for coughs and colds and an aid to gastric digestion. They are also credited with allaying the pains of rheumatism. These properties of the onion are ascribed by the writer to the sulphur contained, in the form of its sulphureted oil, the allyl sulphide.

The turnip, parsnip, and rutabaga contain a peculiar oily principle, which may account for their traditional value as aperients and diuretics, while their juices are an Old-Country remedy for coughs and hoarseness.

It is not alone that the potato possesses decided nutritious value, but it also contains several potent principles, among them solanine, which is credited with diuretic and aphrodisiac properties, and known as a powerful yet safe nerve sedative.

Cabbage contains a sulphur compound, which may account for its alleged value in the treatment of scurvy and scrofula. Spinach acts as a laxative, and it also contains a peculiar principle, as well as considerable iron in organic form. The tomato contains a principle which, when taken in concentrated form, produces salivation and acts as a hepatic stimulant. On this account it has been called "vegetable mercury," and we are assured by The Lancet that "an official tincture of it is prepared in America" just in what pharmacopeia "tincture solani lycopersici" is "official."

Carrots also are said to have a cholagog action; and this humble vegetable is served at certain health-resorts to patients suffering from derangements of the liver. Carrots have also been used as a local dressing, for the relief of pain. This vegetable contains a neutral principle, known as carotin, and a volatile oil, which may explain its traditional curative qualities.

As The Lancet points out, many of our common vegetables contain definite active principles, so that the kitchen may reasonably be rated as, to some extent, a dispensary of medicine as well as of foods.

It need hardly be added, of course, that the foregoing remarks apply, not exclusively to the edible parts of the respective plants, but more or less to other portions, not utilized; or, also to the vegetable at some peculiar (sometimes irregular) period of its development.—Editorial in The London Lancet.

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The brevity of the Towns method makes it a definite hospital work. Its success has extended over a period of 13 years, and it is a recognized scientific treatment for drug addiction and alcoholism.

A frank exposition of the method will be found in "The Physician's Guide"—a book written especially for the medical profession and sent free on request. Details relative to the time required for treatment and the definite charges are given therein.

This Hospital has no connection directly or remotely with any other institution. Consulting Physicians constantly in communication. Staff or residential physicians always in attendance.

Guard the Intestinal Tract.

Concerning intestinal infections and diarrheas: It may be taken as axiomatic that as long as normal bacteria of the gastro-intestinal tract retain their physiological integrity there will be no pathogenic invasion, and consequently no intestinal infection. But a change—often a very slight change—of diet or habit, especially in hot weather—brings about a change in the character and behavior of these intestinal flora. Species which before were benign become malignant; normal types lose their power of resisting invasion by pathogenic types; or they disappear and are replaced by pathogenic germs. Thus the entire bacterial field is changed from a benign activity to a malignant infectious virulence.

The keynote of modern treatment and prophylaxis, therefore, is to give prime attention to the intestinal tract itself, assisting it in every possible way to rid itself of pathogenic bacteria, and to restore the dominance of the normal flora. For this purpose nothing is equal to the influence of the true Bulgarian bacillus. It may be called the policeman of the bowel, and will never fail to restore and maintain order if it be on the ground early enough and in sufficient numbers.

For a long while Galactenzyme—Abbott (supplied in tablet form), has proved itself without a peer as therapeutic preparation of this incomparable remedy; and the manufacturers. The Abbott Laboratories, have now put it on the market in a liquid form, under the name of Galactenzyme Bouillon, which is, in fact, a pure, liquid culture of the Bulgarian bacillus, just as it is developed in the culture medium, for internal administration. It is the last word in Bulgarian bacillus therapy.

The usefulness of this organism, of course, is not confined to intestinal disorders. It is indicated in all infections of mucous membranes, and is an excellent local application in urethritis, leukorrheas, diphtheria, and all naso-pharyngeal inflammations.

For further information and prices see advertisement of The Abbott Alkaloidal Co. (The Abbott Laboratories), Chicago, Page.

The Phylacogen Treatment of Hay Fever

While Mixed Infection Phylacogen was formally introduced to the medical profession in 1912, it was some months later before adequate data as to its value in the treatment of hay fever were available. In 1913 hundreds of cases were reported, details of many of them appearing in the medical press during the latter months of

that year. The results from these clinical observations were highly significant, showing a surprisingly large percentage of recoveries and warranting the belief that in Mixed Infection Phylacogen the physician had acquired a formidable weapon for his fight with one of the most stubborn diseases that he is called upon to treat.

Mixed Infection Phylacogen is administered hypodermatically. The initial dose should be small, the usual procedure being to begin with a 2-Cc. dose subcutaneously or a $\frac{1}{2}$ Cc. dose intravenously. The reactions occur more quickly, and are ordinarily more severe, following intravenous injection.

"In giving the subcutaneous injection," one writer explains, "I usually select as a site the insertion of the deltoid or the area just below the scapula. The latter seems to be the ideal spot, as absorption takes place very readily and the complaints from the local reaction are much less. I repeat my injection either daily or an alternate days, the interval to be determined by the clinical condition of the patient. It is seldom necessary to administer more than four to six injections, the symptoms often disappearing after the second or third injection. Almost immediate relief is noted by the patient. The irritating discharges from the eyes and nose are diminished in amount, the sneezing is lessened, the dyspnea is relieved, and the patient usually sleeps comfortably. All patients that I have treated successfully have remained well through the season. I have yet to record a failure, but I have not had a sufficient number of this class of cases as yet to warrant a positive claim that this remedy will act in all forms of this disease."

Mixed Infection Phylacogen is supplied in 10-Cc. bulbs. As is doubtless well known to most physicians, it is a Parke, Davis & Co. product.

Mechanical Treatment of Constipation.

The great value of perfect elimination through the bowels in preserving the equilibrium of the various functions has been much emphasized by many authorities. And evidence is at hand to support the view that relief of intestinal stasis is the key to the situation in many cases of chronic ill health.

The reports to date on the use of heavy Russian Mineral Oil in stasis are very encouraging and its use as a lubricant seems very rational especially in those cases due to lack of proper secretion and dryness of fecal contents.

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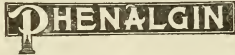
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among therapeutic agents. In the hands of many physicians Papine (Battle) has produced identical results with those derived from the administration of opium or codeine. The employment of small doses at the beginning, and thereafter increasing until the required effects are produced or until narcotic symptoms are exhibited, when the dose will be held stationary or reduced, is the practice usually followed.

Modern Administration of Cod Liver Oil.

In olden days whilst the great nutritive value of cod liver oil was fully recognized and every effort made to place it at the patient's disposal, yet the lack of a palatable product all too often made its employment unsatisfactory or even impossible.

For many years this draw-back of cod liver oil deprived the profession of the best of tissue foods and it was not until pharmaceutical science devised means of making the oil palatable that it began to come into its own. *Cord. Ext. Ol. Morrhuæ Comp.* (Hagee) is the most valuable and widely employed of the preparations of cod liver oil, and largely so because the medical profession has long recognized its superior worth. It may be given over long periods of time without causing gastric distress.

Incurvate Little Fingers in an Afro-Aryan Child.

Crookshank reports the case of a female aged three years who had been under treatment for rickets somewhat irregularly during the past fifteen months. When first seen the incurvation of both little fingers were marked. This morphological character, although most often spoken of in connection with mongolism, was really, as had been noted by Keith and others, to be seen in the young of every primitive human race, and of all anthropoids. Its relation to mongolism is therefore general and not peculiar. The patient was the offspring of a male African negro and a female Cingalese, and was therefore without any trace of racial mongolism. A year ago her eyes most resembled those of a negro baby. They are now full, like those of the Cingalese and some other "Aryans."—Proceedings of the Royal Society of Medicine.

An Empirical Remedy for Asthma.

Leclerc states that the magicians of Anam and Tonkin have for a long time employed in the treatment of asthma a substance obtained from the salivary secretion of sperm-whales. The natives collect this secretion whenever one of these animals is

caught. This secretion when dried is of a sticky and elastic consistency, of a grayish color, and of a slightly bitter taste. It is employed in doses of 1 or 2 grams per day. The remedy is called "long-duyen-huong." It quickly relieves an attack of asthmatic dyspnea. It causes no gastric derangement but gives rise to a metallic taste which is similar to that produced by potassium iodide. The fact also that it lowers arterial pressure like potassium iodide leads the author to believe that "long duyen-huong" owes its antispasmodic property in all probability to the presence of potassium iodide in organic combination.—*Gazette des Hôpitaux*.

Multiple Subcutaneous Cysts in the Arms

Cautley reports a case of a male aged seven months who was the sixth of the family, only one being dead. He had fits at intervals from the age of four days to eight weeks, and again last December. Apart from this he was reasonably healthy, though somewhat rachitic and ill nourished. "Lumps" were said to have been present at birth on the left and right arms and two on the back. They were described as having been purple and hard, and as having been called abscesses. They were also said to have pitted smaller. No new ones had appeared and none had been noted in the other children. There were several nodules, varying in size from a millet-seed to a pea, in the left arms, mainly from the shoulder to the elbow. The skin seemed adherent to the larger ones, but the others were subcutaneous. Two minute ones were present at the bend of the right elbow; on removal these were found to contain clear fluid. The two said to have been present on the back disappeared.—Proceedings of the Royal Society of Medicine.

Injurious Soap.

It is apt to be assumed by users of soaps that their only difference is one of cleansing quality and that the quickest and most thorough cleanser is the best. Soaps act, however, largely through chemical properties, and both textiles and the human skin often suffer from the chemical action that they induce. The most widely accepted theory is that soap cleanses because it forms an emulsion with dirt and the liberated alkali removes the fat which causes dirt to cling. The effect of soap upon the skin therefore depends on the sensitiveness of the skin to the action of alkali. A writer in *The Lancet* (London, September 6) cites an interesting contribution on this subject recently issued from the laboratory

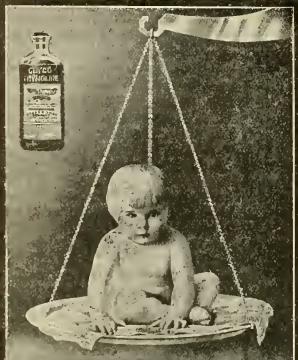
of the Royal College of Physicians of Edinburgh, entitled Soaps and their Effect on the skin. The author Dr. Frederick Gardner, points out that among the dearer toilet and superfatted soaps the proportion of mineral ash and alkali is at least as high as in the coarser types. His findings are thus given:

"When an alkaline solution such as that of soap touches the skin there is induced both an excessive secretion of the acid sebum and sweat, and a solvent effect on the protective epithelium. Reviewing the different ingredients found in soaps, he concludes that all soaps from their chemical constitution must be irritant to the normal skin. The effect varies, he states, with the individual skin, and is more pronounced in senile and diseased skins. Cotton seed oil and rancid fats, according to his observations, are probably largely responsible for the irritant effects in cheaper soaps. Castor oil soap, he finds is least irritating, but it has the disadvantage of being too freely soluble, and therefore wasteful, while it is apt to become rancid. Coconut-oil soap is decidedly irritating, while palm oil soap, the still an irritating variety, is less so, and tallow, soap shows a low irritating value. If these deductions are correct, Dr. Bardner thinks they supply a reason for the bad effects of modern domestic soaps of the cheaper and clothes washing kinds, as they are made mostly from cheaper fats and the cheap oils, coconut and cottonseed. Formerly tallow and olive oil were more used, and the evil effects of soaps were not so pronounced at that time. No one can be in touch, he says, with the outpatient department of a large hospital and not observe the economic loss and physical damaged due to soaps and soap-powders." Literary Digest.

The Treatment of Acute Bronchitis.

Thomson notes that the indications for treatment in an attack of acute bronchitis are to promote the free flow of the secretions and to allay the spasm. The former indication is met by the use of oils. Of these linseed oil is the best. It is given as an emulsion prepared according to the following formula:

R Irish moss, 1 ounce.
Marshmallow root, 2 ounces.
Water, 3 pints.
Boil one-half hour; strain to 3 pints;
add linseed oil (15 ounces) to make emulsion.
Oil of wintergreen, 2 drams.
Oil of cassia, 2 drams.
Glycerin, 5 ounces.
Simple syrup, 10 ounces.



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for teething babies; a little rubbed
on the gums, rapidly reduces the
inflammation and conserves the little
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Dilute hydrocyanic acid, 160 minims
(1 minim to each tablespoonful.)

The dose of the above is one tablespoonful.

A second formula contains the same ingredients with the addition of the following:

Chloral hydrate, 15 grains.

Magendie's solution, 5 minims to each ounce.

The author has rarely found an attack of acute bronchitis which is not relieved within forty-eight hours by the use of this remedy.—"Clinical Medicine."

The Treatment of Obesity.

Carles points out that in the treatment of obesity the various topics of this condition must be borne in mind. Thus in its etiology the following factors play an important role: overfeeding, heredity, digestive disturbances, and anomalies of the internal secretions. Ovarian extract is of value in the obesity of the menopause or in that following ovariectomy, and testicular extract is of value in the obesity resulting from atrophy of the testicles. Thyroid administration is indicated in cases of obesity associated with a larval myxedema. But in this condition it is important to give only very small doses of the remedy, e.g., from 0.025 to 0.50 gram per day. There is an infectious or a toxic type of obesity whose etiological cause may be difficult to control. To this category belong the obesity following typhoid fever and that associated with syphilis or florid tuberculosis.—*Journal de Medicine de Bordeaux*.

Fracture of an Incisor Tooth; Dental Cyst

Turner reports the case of a patient, aged 12 years, who had a fall two years ago and fractured one of the right upper incisor teeth. Three months ago a swelling of the right upper jaw was noticed. This had increased slightly since then. There was a well-marked bulging forward of the facial aspect of the right superior maxilla. Digital pressure in the region of the canine fossa gave typical "egg-shell crackling." The hard palate on the right side was depressed, and there was a widening of the anterior part of the alveolar process. There was no exophthalmos and no nasal obstruction or discharge from the right nostril. The right central incisor was fractured and the pulp exposed; the right temporary canine had not been shed and was loose. A skiagraph showed that the pulp cavity of the fractured tooth was exposed, and that the apex, which was imperfectly formed, projected into the cyst cavity.—*Proceedings of the Royal Society of Medicine*.

Treatment of Chronic Proctosigmoiditis.—Bensaude and Thibaut, (*Bulletins et memoires de la societe medicale des hopitaux de Paris*), refer to the fact that although the lesions of proctosigmoiditis at first present the characteristics of specific infections—dysentery, tuberculosis, gonococcal infection, or syphilis—these special appearances are often lost, the condition becoming one of ordinary nonspecific inflammation. The treatment presents considerable difficulty, the local process often proving extremely rebellious. Of all procedures tried, the most satisfactory in the authors' hands has been the following: The rectum is first cleansed (without a previous enema) with cotton pledgets dipped in tepid oil. Topical medication is then conducted through the endoscope by bringing in contact with the entire affected mucous surface petrolatum containing bismuth subcarbonate or colloidal silver (15 per cent.), or a solution of silver nitrate to which a few drops of one in 1,000 epinephrine solution have been added. Immediately before or after the application, a few drops of laudanum are given to quiet peristalsis. Decided benefit was also obtained in ulcerative proctitis by the use of high frequency currents, and in hemorrhagic forms, radium treatment was tried with success. Where local treatment fails to improve the condition, it should, after a time, be temporarily or permanently discontinued, as irritation might eventually result. In any case, attention to the patient's general condition, almost always considerably impaired in the presence of disease, even benign, of the terminal segment of the intestine, is essential to success of the local measures. In the refractory cases, appendicostomy may be resorted to.

Treatment of Pyogenic Tubercloid Skin Lesions.—Gougerot, (*Paris Medical*), mentions the diagnosis and treatment of papulopustular skin lesions, closely resembling those produced through local tuberculous infection, but in reality of pyogenic origin and more properly to be termed ecthyme, impetigo, or folliculitis. They are met with at all periods of life, especially on the lower extremities. The ulcers, like the true tuberculous form, show violet colored, irregular margins, drag on for weeks, and often co-exist with pallor and more or less emaciation of the patient. The lesions differ from the tuberculous, however, in developing in a short period—four to ten days—sometimes presenting a distinct "acute" stage, and being accompanied by ordinary pustules characteristic of pyogenic infection, which themselves will later become "tubercloid."

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PAPINE may be added to a cough mixture with much benefit.

IODIA is frequently of advantage in chronic skin lesions.

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The first measure of treatment is to cause the crusts to fall off by moistening them with a spray of boiled water or one in 200 resorcinol solution, or with wet gauze compresses. After this, an application of the following solution, either as such or diluted with an equal part of boiled water should be made for one minute three times a day:

R Zinci sulphatis,.....g. xxx (2 grams);
Cupri sulphatis,.....g. xv (1 gram);
Alcoholis,.....℥iiss (5 grams);
Camphoræ,.....gr. viii (0.5 gram);
Aquæ destillatæ,.....3 x (300 grams);
M. et ft. solutio.

As soon as this has dried a zinc ointment or cream should be applied:

R Zinci oxidi, ...gr. xlv (3 grams);
Aquæ rosæ,.....℥lxxx (5 grams);
Adipis lanæ hydrosi,....gr. lxxv (5 g.);
Petrolati,.....5 v (20 grams);
M. et ft. unguentum.

The limb should be wrapped in dry dressing of cotton wool, dusted with:

R Talci,.....3 iii (90 grams);
Sodii boratis,.....3 iiss (10 grams);
M. et ft. pulvis.

If the lesions return, the zinc oxide ointment should be replaced by one of calomel, one part in ten, and the nascent pustules opened with a sterilized needle and cauterized with a drop of iodine tincture.

When the skin is beginning to clear, the treatment may be simplified by merely applying the calomel ointment—or the zinc ointment, if the former is irritating—over night and protecting the lesions with round pieces of zinc oxide plaster.

If healing is delayed, as is often the case, the use of the zinc and copper solution should be continued and the following ointment, recommended by Sabouraud, applied:

R Ferri subcarbonatis, gr. xv (1 grams);
Petrolati,.....3 x (40 grams);
M. et ft. unguentum.

Occlusion of the fundus of the ulcers by this ointment may be overcome by cleaning them out with oil of sweet almonds. The zinc and copper solution should be stopped as soon as cicatrization commences.

At the beginning of the treatment rest of the involved limb is to be enjoined, but later, while the iron ointment is being continued, the patient may be allowed to walk and even resume his ordinary occupation, the area being merely protected by a dry bandage or pieces of zinc oxide or diachylon plaster. Outdoor life and exercise are

desirable if circumstances permit. Medical treatment should consist of the administration of iodine, calcium, and arsenic.

Preventive treatment is of capital importance, as recurrence is the rule, and should include gentle rubbing with camphorated alcohol (ten per cent.) every morning, followed, after drying, by a dusting with one of the subjoined powders.

1.

R Talci pulveris,.....3iii (90 grams);
Sodii boratis,.....3 ii (8 grams);
Acidi borici,.....3ss (2 grams).
M. et ft. pulvis

2.

R Talci pulveris,.....3 iiiss (99 grams);
Acidi salicylici,.....℥rs. xv (1 gram).
M. et ft. pulvis.

New vesicles should be watched for daily, and as they appear, cauterized morning and evening with a matchstick dipped in tincture of iodine, or, if they develop into pustules, opened at once with a needle sterilized in a flame, expressed, and cauterized repeatedly with iodine tincture until even the succeeding induration has completely disappeared. These measures are almost always adequate. If the lesions recur, heliotherapy should be resorted to, the patient exposing the area to direct sunlight, beginning with fifteen minutes, then increasing daily by five to ten minutes until two or three hours' exposure is finally reached. The patient's head should be protected during these exposures. "Tanning" occurs at the diseased area, suppuration being aborted and failing to return.

Caffein in Coca-Cola.

The modern conception of the physician is vastly different from what it once was. Nowadays the duty of keeping people well is held to be equally important as making them well when they have fallen ill.

This attitude entails the necessity for exercising a much closer supervision of the life and habits of those people to whom the physician stands in this relation, and his advice upon such matters as clothing, eating and drinking and personal hygiene is highly respected even if not always followed.

Such being the case there must be a number of physicians who are asked for their opinion of COCA-COLA. The controversy which has been stirred up over this most popular of all summer beverages is of great interest to the whole medical profession.

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unusual success and undergo several illogical and ill-tempered attacks. It has been called poisonous, it was spoken of as dangerous and habit-forming in its effect. These contentions have all been met and refuted, completely and emphatically, and, casting about for another peg to hang an argument upon, the subject of caffeine has not been brought up. Caffeine, as all physicians know, is the property that gives to tea and coffee the beneficial, fatigue-relieving and refreshing qualities that have established them in almost universal use for thousands of years.

The physiological action of caffeine has been closely studied and the most exhaustive tests carried out upon human subjects for the purpose of discovering exactly what effect it has upon the organism. The general conclusions arrived at by the investigators, men of sound standing and international reput, can be condensed into two brief statements, viz:

1st. The general effect of caffeine upon the mental and motor processes is one of stimulation. Increased capacity for work is plainly demonstrated.

2nd. In none of the experiments is there any trace of secondary depression or reaction effects.

Rhabdomyosarcoma of The Uterus.—

Glynn and Bell (Jour. Obst. and Gyn. Brit. Emp.), have collected fifteen undoubted cases and three probable ones, and have added two cases of their own. The structure of uterine rhabdomyosarcoma is very complex. The transversely striated muscle cells are very few and form only a small

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portion of the tumor. The term rhabdomyosarcoma is used simply to indicate the presence of a very characteristic type of cell. In addition to muscle cells in various stages of development there are also present small spindle and small round cells, which sometimes form a stroma for the larger muscle cells. Other elements frequently found are: multinucleated cells or sarco blasts, myxomatous tissue, cartilage, and gland tissue. These neoplasms come under the category of mesodermal mixed tumors and probably arise from displacements of embryonic mesodermal tissue from the lumbar region during early fetal life. The persistence of the actual embryonic round-celled tissue may give rise to some of the small round cells so frequently present. The glandular elements occurring in some of the cases are possibly derived from the Mullerian ducts. It seems much more probable, however, that they are persisting uterine glands, and they may under certain circumstances undergo collateral hyperplasia, or even carcinomatous degeneration. Rhabdomyosarcoma of the uterus may occur at any age, the limits recorded being two and one-fourth years and seventy-five years. Hemorrhage and a foul discharge are the chief symptoms of this, as of any other malignant disease of the uterus. The growth is very friable and rapidly breaks down; and is practically always polypoid. When the growth projects into the body of the uterus, hemorrhage is liable to be severe. When it projects into the vagina and arises from the cervix, the growth becomes septic, ulcerates superficially and gives rise to a foul discharge, and in some cases to serious bleeding. Clinically the disease must be distinguished from breaking-down fibromyoma, from carcinoma and pure sarcoma, but correct diagnosis is only possible after histological examination. Rhabdomyosarcoma of the uterus appears to rival chorion-epithelioma in its malignancy, rapid growth and in the speed with which it leads to a fatal tissue. In the recorded cases there appear to have been fourteen deaths within a few months of the first symptoms. The longest period of time any of these cases survived was one year after operation and two and one-half years after the first symptoms. A few of these deaths, however, appear to have occurred as the result of operative procedures.

Gallop Rhythm and Extrasystole in Diphtheritic Myocarditis.—Blacher (Jahrbuch. f. Kinderheil,) declares that there are two types of gallop rhythm found in diphtheritic myocarditis, presystolic. These two types are more theoretic than practi-

cal, the difference having no influence on therapeutics or prognosis. The change in rhythm is a sign of heart weakness, yet the cause is different; the presystolic gallop rhythm is an active symptom, and there is a qualitative and quantitative change in the auricular action; the protodiastolic has to do with a passive condition in the beginning of the diastole. Romberg and Passler see the cause of the trouble in a medullary paralysis of the arteries, resulting the low blood pressure, partial filling of the vessels, and a large amount of the blood being held in the splanchnic circulation, thus rendering the other organs anemic. They are decompensation, slowing of the lesser circulation, swelling of the liver, and dilatation of the heart. We have to deal here with two factors, disturbances of the vasomotor centers and of the heart muscle at the same time. In diphtheritic myocarditis the tonus of the vegetative nerve system is of the greatest importance for the power of the heart. Diphtheritic poison is in the first rank of influences on the medullary centers. The doctor gives interesting histories of a number of cases, and sums up his conclusions thus: Gallop rhythm and extrasystoles appear with the beginning of the effects of the poison on the heart and this effects is seen in the circulation. Protodiastolic gallop rhythm is seen generally in severe myocarditis with decompensation and dilatation, while the presystolic is found in slight forms, and often indicates the appearance of kidney affections. Therefore the differentiation of these two forms has prognostic value. Increase of resistance in the general circulation manifests itself in constriction of the vessels and the decompensation and dyspnea arise from disturbances in the vasomotor system. The fact that presystolic gallop rhythm may be found in light as well as severe forms goes to show that it is not dependent on the grade of the anatomical lesion of the heart. It is a warning of active poisoning. A pathological increase of tunction of the musculature of the ventricles during diastole may be the cause of the protodiastolic gallop rhythm, and may come from increase of pressure in the general circulation. The cause of presystolic gallop rhythm is not always to be found in an increase of auricular systole. Clinical symptoms of diphtheritic myocarditis show that the dependence of gallop rhythm on influence on the central nervous system is probable. It apparently depends on an increase of the vagotonus; an overinfluence of the sympathetic system and increase of automatism arises. Therefore the occurrence of gallop rhythm is not a precise indication of the degree of anatomic lesion of

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the heart muscle, although gallop rhythm and changes in heart muscle often occur together. A causal relation between these two factors may be predicated only so far as the heart muscle injured by the diphtheritic poison loses the power to react to nervous, mechanic, and other influences. The same conclusions are probably correct for the extrasystoles and their clinical meaning is to be considered in the same light.

Nephroptosis: Its Relation to Mental Disorders.

Pardhy in *The London Conclusions Practitioner*, are based upon nephropexy performed upon 415 patients, in 396 of whom both kidneys were fixed. The majority of patients suffered more or less from neurasthenia, either mainly or in addition to, digestive, genito urinary, and local symptoms, or various neuroses, e. g., severe headaches, tachycardia, asthma, hemicrania, etc. He remarks, deal, however, with nephroptosis in relation to definite and marked mental disorders, e. g., severe melancholia, with or without delusions, insanity, and mania. The doctor performed nephropexy upon twenty five patients of this type. The writer says that nephroptosis may cause serious vascular and ureteral obstruction and interference with the normal function of the kidney, which when often repeated causes varying degrees of dilatation of the calyces or pelvis, flattening of pyramids, hydronephrosis, loss of kidney substance, and cystic degeneration. This may lead to auto-intoxication, causing, among other things, destruction or impaired function of the cerebral cells, and mental disorders. It is possible that the local effects of nephroptosis—backache, pain over the distribution of the last dorsal nerve, colitis, constipation, flatulence, etc.—contribute toward bringing on mental disorders. But that this is a very small factor is evident from the large number of cases in which no such local symptoms have been present, but the mental disorder was the most marked feature, and nephropexy cured it. Nephropexy is the proper and rational procedure in cases of mental disorders, when movable kidney is present, and the only contraindications are those to be cited against any major operation. Nephropexy, to be of full benefit, must be performed properly and efficiently. Fixation of the kidneys any how or anywhere will often result in more harm than good. The chances of cure of the mental disorder after nephropexy he estimates at not less than 50 per cent. Even if fixing up the kidney does not cure the complaint, it cannot in any

sense make the patient worse. The patient should be watched and taken care of for a prolonged period till the cure is established. The poorer class of patients should either be sent to an asylum, so that they can be taken care of efficiently.

The Cutaneous Tuberculin Reaction of ou Pirquet.

Leckie (*Brit. Med. Journal* May),

The writer's experience is best expressed by quoting his conclusions, which are as follows:

1. That the cutaneous reaction is of no prognostic or diagnostic value.
2. The results are more frequently obtained in women and children than in men.
3. That the older the individual the less likely is the reaction to be obtained; old-standing lesions, as distinguished from advanced cases, usually fail.
4. That cases of rheumatism give more positive results than tuberculous individuals.
5. That late and early reactions have no clinical significance.

Apraxia with Lesion of Corpus Callosum.

Forster (*Monatsschrift f. Psychiatrie u. Neurologie*,) describes a case of apraxia, the result of glioma of the corpus callosum, which was found to have been completely destroyed to the level of and in front of the anterior central gyri, while the posterior remained intact. A distinctive characteristic of the case was the patient's lack of ability to perform such combined movements as threatening, beckoning, snapping the fingers, whereas the handling of objects presented no difficulty. From this is drawn the hypothesis that motor memories are located in the region anterior to the central gyri, and that if the portion of the corpus callosum connecting the supra-marginal gyri is intact the patient can still perform complex movements if the necessary visual or auditory stimulus is provided, such as combing the hair when the comb is furnished. The article is illustrated.

Charcoal in Internal Diseases.

At the Congress of Internal Medicine at Wiesbaden, the report of Wielchowski and Adler on charcoal in internal conditions was worthy of interest. The experiments of Wielchowski showed that if certain forms of charcoal are administered simultaneously with poisons, the latter become inert. He considers a marked delay in absorption as the cause of this anti-poisonous

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tion. If a bolus methylene blue combination is taken, the urine becomes blue, and if a combination of animal charcoal and methylene blue be given, methylene blue is not set free in the system and the urine retains its normal color. O. Adler has found charcoal systematically in various intestinal conditions and cases of poisoning. All of the latter (including phosphorus, sublimate and morphine poisoning) recovered. Enteritis and gastritis, with no anatomical change, were favorably influenced. Hyperacidity and intestinal processes, due to bacteria, also seemed to improve. A saline cathartic should be given after the charcoal.—Therap. der Gegenwart.

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Since Warburg and Jones were not likely to pass muster even for the banking board, it is obvious that neither of them could Possibly be considered for the trust board, since both of them are men of large wealth who have been associated with the successful side of corporation management. The business affairs of the people of the United States are in large measure to have supervision by three great boards at Washington. (1) The Interstate Commerce Commission will continue increasingly to dominate the railroads and transportation enterprises. (2) The banking and currency systems, in their application to the affairs of localities and sections, will be dominated by the Federal Reserve Board. (3) The problems have to do with so-called trusts, monopolies, and industrial corporations will be passed upon by the Federal Trade Commission. Must we adopt the view that men who are fit to serve the country on one of these great business boards are unfit to serve it upon one of the others? The best advice we can give to the Senate is to find as much public courage as the exigencies of politics will permit, and forswear their hypocrisies. Men like Mr. Warburg and

Mr. Jones are honest and sincere, and would not take a public office with improper motives. Either one of them is entirely fit to serve on any one of the three business boards. Mr. Jones may well be proud to have been connected with so fine a group of men, and so admirable an undertaking, as the International Harvester Company. Its record is fine; it has served the public well; and it may be said of it, of the United States Steel Corporation, that its competitors have had no grievances against it which have been made the basis of pending suits. Members of the United States Senate know very well that good bankers and successful business men can be found in large numbers who are trustworthy. They are quite as fit as the typical "lame ducks" who are always promptly confirmed as a matter of Senatorial "courtesy."—From "The Progress of the World," in the American Review of Reviews for Author.

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Henry Enos Tuley, M. D., Sec'y.,
705 S. Third St., Louisville, Ky.

D'Orsay Hecht, M. D., Pres. Chicago, Ill.

SOUTHERN SURGICAL and GYNECOLOGICAL ASSOCIATION.

Annual Meeting place, and date, to be
announced later.

W. D. Haggard, M. D., Sec.,
Nashville, Tenn.

John Young Brown, Pres.,
St. Louis, Mo.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Lexington, Ky.

Nov., 18-19-20, 1913.

Seale Harris, M. D., Sec., Mobile, Ala.

Stuart McGuire, M.D., Pres. Richmond, Va.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting Feb. 1915.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Edw'd C. Register, M.D., Pres.
Charlotte, N. C.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Montgomery Ala. April
16th, 1914.

J. N. Baker, M. D., Sec., Montgomery Ala.

R. S. Hill, M. D., Pres, Montgomery, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting, place and date to be
announced later.

F. H. Clark, M. D., Sec., El Reno, Okla.

W. T. Wootton, M. D., Pres.,
Hot Springs, Ark.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Olando, Florida,
May, 13, 1914.

J. D. Fernandez, M.D., Sec.,
Jacksonville, Fla.

P. C. Perry, M. D., Pres.
Jacksonville, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Atlanta, Ga.,
April 15-17, 1914.

W. C. Lyle, M. D., Sec. Augusta, Ga.
Ralston Lattimore, M. D., Pres.,
Savannah, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Newport, Ky.,
(Date not yet decided,) 1914.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

W. O. Roberts, M. D., Pres.
Louisville, Ky.

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at New Orleans, La.
April, 1914.

L. R. DeBuys, M. D., Sec.,

141 Elk Place, New Orleans, La.

Ered J. Mayer, M. D., Pres. New
Opelousas, La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Columbus, Miss.
April. 14 1914.

E. F. Howard, M. D., Sec.,
Vicksburg, Miss.

L. C. Feemster, M.D., Pres., Nettleton, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Raleigh, N. C.
June, 16, 1914.

James M. Parrott, M. D., Pres.
Kinston, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
(date not yet decided) 1914.

Dr. R. E. McBride, M. D. Las Cruces N.M.
Secretary.

H. B. Kauffman, Pres. Albuquerque, N.M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Florence, S. C.,
April, 14-16, 1914.

Edgar A. Hines, M. D., Sec., Seneca, S. C.

W. M. Weston, M. D., Pres.,
Columbia, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Memphis, Tenn.,
April 7-9, 1914.

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MEDICAL SOCIETY OF VIRGINIA.

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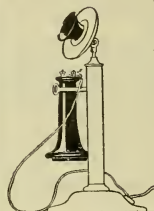
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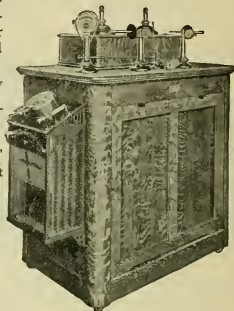
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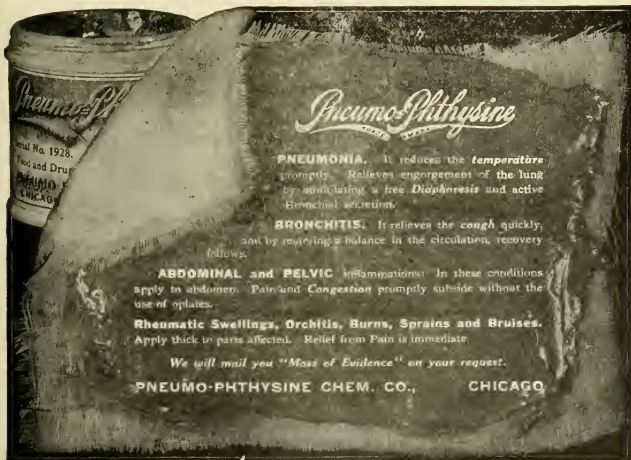
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Gall-Stones, Pancreatitis and Their Relation to one Another.

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In the embryo, that part of the fore gut which is situated below the stomach forms the duodenum. About the third week of development a diverticulum springs from the duodenal end of the embryonic fore gut and pushes into the anterior mesogastrium as far as the transverse fissure of His. From this diverticulum two beads are developed, which form the liver, gall bladder and bile ducts. One week later (the fourth week of fetal life) two processes grow from the duodenal end of the mesogastrium and form the pancreas. The pancreatic lobes retain their primitive form to the extent of having two openings into the duodenum.

The liver is a large glandular organ weighing from 50 to 60 ounces. It has a transverse diameter of from 10 to 12 inches, an antero-posterior diameter of from 6 to 7 inches, and its greatest thickness, which is the back part of the right lobe, is about 3 inches.

The liver is situated in the right hypochondriac and epigastric regions. It is moulded to the diaphragm and, in the greater part of its extent it lies under cover of the ribs and their cartilages. In the subcostal angle it comes in direct contact with the abdominal wall.

In structure the liver is soft, friable and vascular.

The functions of the liver seem to be:

- (1) A glyconic function.
- (2) A function associated with the formation of urea and uric acid.
- (3) A germicidal function.
- (4) The formation of bile.

Though the last function is in all probability a subsidiary one, bile containing the waste products of the liver, it is largely the result of other activities. Nevertheless, in our present study it is a most important factor and in this connection it is necessary to review the anatomy of the gall-bladder and bile ducts.

The normal gall-bladder is pear-shaped, is from 3 to 4 inches in length, one and a quarter to one and a half in width at the fundus, and has a capacity of about one

and a half ounces. It lies obliquely, the fundus being directed downwards, forwards and to the right, and touching the anterior abdominal wall at the meeting of the outer border of the right rectus and the costal arch. This point corresponds with the tip of the ninth rib and can be most easily determined by first noting the tenth rib, which is free and therefore more readily identified. The neck of the gall-bladder is directed upwards, backwards, and to the left.

The relations of the gall-bladder are important. The fundus is covered by peritoneum, but above this there is an uncovered area lying in contact with the liver in the fossa for the gall-bladder. The extent of this surface varies in different individuals, and, it is to be remembered that in some cases the gall-bladder has a distinct mesentery permitting the organ to move about in the abdomen. Moynihan puts such cases at 5 per cent. The posterior relations are, from below upward, transverse colon, duodenum and sometimes the pylorus.

As we approach the cystic duct the gall-bladder is found to narrow and to become somewhat thicker and to form what is usually described as an S-shaped curve. There has been much discussion over the importance of this curve, and it is a matter of common observation that a stone often lodges beyond the first turn of the curve and that there is considerable difficulty in bringing such a stone back into the gall-bladder. Bevan has still further called attention to the curve by demonstrating that it can be entirely eradicated by dividing the peritoneum and connective tissue around the neck of the gall-bladder and the cystic duct.

If we now open the gall-bladder we shall see that at the commencement of the cystic duct there is a projection of mucous membrane. This may be considered the first of a series of valvular projections which extend along the cystic duct, though in many cases only three or four can be demonstrated. They are known as the "valves of Heister." One more point of importance is noticed on inspection of the inner surface of the gall-bladder, namely that its point of exit is not its lowest point, but is elevated and a little to the inner side. This little depression is known as Hartmann's pouch and is significant as it is apt to render more difficult the passage of a

probe into the cystic duct.

The cystic duct is the tube leading from the neck of the gall-bladder to the common hepatic duct, their union forming the common bile duct. It is one and one-half inches in length, runs downwards and to the left between the layers of the lesser omentum. It has an average diameter of one eighth of an inch. The cystic artery, a branch of the right hepatic, lies close to the cystic duct, slightly above and to the inner side of it. The right and the left hepatic ducts issue from the extremities of the transverse fissure of the liver and unite to form the common hepatic duct.

The common hepatic duct is two inches in length and one-sixth of an inch in diameter; it runs downward and lies to the right of the portal vein. The common bile duct is a little over three inches in length and about one-quarter of an inch in diameter and diminishes in size downward.

The cystic duct is thus the narrowest of the three ducts. The common duct extends from the point of union of the common hepatic and the cystic ducts downward and slightly to the right to end in the "ampulla of Vater," which is situated in the second portion of the duodenum about four inches from the pylorus. For descriptive purposes it is well to divide this duct into three portions, as in cases of biliary calculus the surgical procedure differs according to the part of the duct in which the calculus has found lodgement.

(1) Supraduodenal—Extends from the formation of the duct to the posterior surface of the duodenum. It lies in the free edge of the gastro-hepatic omentum, and is one and one-half inches in length. To its left is the hepatic artery and behind both the duct and the artery is the portal vein. In this region the duct is in front of and assists in forming the anterior boundary of the foramen of Winslow. (Normally two fingers can be introduced into the foramen of Winslow, but in patients who have suffered from cholelithiasis it is often narrowed or obliterated by adhesions.)

(2) Retroduodenal—Sometimes called the pancreatic portion from its close relation to the pancreas, being either in a groove or within a canal formed by the gland substance. Helly puts the number of cases surrounded by gland substance at 62½ per cent. This relationship we shall see later on to be of the greatest surgical significance. This part of the duct, as its name indicates, lies behind the duodenum.

(3) Transduodenal—Is that portion of the duct which transverses the second portion of the duodenum. This portion is about one-half inch in length and has an

oblique position in the posterior wall of the duodenum. Its mode of termination is of the greatest clinical significance and to be properly appreciated requires a passing study of the diverticulum of Vater, the duct of Wirsung and the duodenal papilla.

The diverticulum of Vater is a conical cavity, six to seven mm. long and four to five mm. wide. (At its base are the openings of the common bile duct and the duct of Wirsung.) (This cavity or diverticulum is regarded by some as a dilatation of the common bile duct in the duodenal wall after its union with the duct of Wirsung.)

At the apex of this diverticulum is a small opening into the duodenum, which in the duodenum is marked by a projection known as the papilla.

The opening of the ampulla on the surface of the papilla is narrower than any portion of the duct. This anatomical fact may have the greatest clinical significance, as a stone may pass through the cystic and common ducts, enter the ampulla and become lodged in the duodenal orifice, thus converting the bile duct and the pancreatic duct into a closed channel.

There is usually a lymphatic gland at the neck of the gall-bladder where the S-shaped curve is made into the cystic duct, also at the angle between the cystic and the hepatic ducts, and five or six placed along the cystic and the common ducts. Their significance is: first, they may by their enlargement cause a blockage in the ducts or gall-bladder, secondly they may be so hard and firm that they may be readily mistaken at the operation for stones.

I have carefully examined the gall-bladder and biliary passages in 150 cadavers and have never found a single anomaly. There were among the number a few cases which at first seemed to be anomalous, but which a careful dissection showed to be nothing more than distortions due to adhesions, evidently the result of inflammatory conditions accompanying gall-stones, as in each case gall-stones were present in the gall-bladder or in some parts of the ducts.

The following anomalies have been described:

(a) Transposition of the viscera with the gall-bladder to the left side.

(b) A double gall-bladder and cystic duct.

(c) A gall-bladder situated within the liver substance.

(d) A gall-bladder directly connected with the hepatic ducts, the cystic duct being absent.

(e) Absence of the common hepatic duct, the right and left hepatic ducts unit-

ing directly with the cystic to form the common bile duct.

Sometimes the right primary division will unite with the cystic, the left extending down nearly to the duodenum before meeting its fellow.

The function of the gall-bladder is twofold:

(1) It has many times been demonstrated that the mucus secreted by the glands in the mucous membrane of the gall-bladder has a decided germicidal action.

(2) It acts as a safety valve to regulate the pressure of bile within the ducts. Evidence of this is found in the fact that during digestion the gall-bladder is found to be constantly contracting and dilating; this suggests a varying degree of tension in the common duct, relieved when necessary by dilatation of the gall-bladder. Furthermore, in cases where the gall-bladder has been removed and, years later it has been necessary to open the abdomen, the common duct has been found greatly distended, evidently an attempt to compensate for the gall-bladder.

If it is a fact, and there seems to be both laboratory and clinical experience to show that it is such, that the gall-bladder possesses these functions, it seems to me that the organ should be removed only when it becomes so extensively changed that it ceases to possess the power of secreting a germicidal mucus, and has lost its elasticity to such an extent that it can no longer regulate the pressure within the ducts.

For our present purposes it is not necessary to consider all the varieties of gall-stones that have been described. Suffice to say that the two principal constituents are cholesterolin and bilirubin calcium. It is a fact of the very greatest importance that both these substances are derived from the mucosa of the gall-bladder. They are not formed by perfectly normal mucosa, but only slight changes are necessary for their production. The slightest inflammations, accompanied as it is by desquamation of the epithelium and increased outpouring of the mucus from the glands, is probably the condition which usually precedes and accompanies the formation of gall-stones. Should, on the other hand, the inflammatory process be sufficiently severe to destroy the mucous membrane, it would at the same time destroy the source of gall-stones. Gall-stones are sometimes found in the intra-hepatic ducts in cases of cirrhosis of the liver. These cases are extremely rare, and there can no longer be any doubt that the gall-bladder is the site of their formation in the very great ma-

jority of cases. Stones formed in the gall-bladder may migrate to the hepatic and intra-hepatic ducts.

It would seem then that to determine the cause, or causes, of gall-stone formation we should have to discover the conditions which give rise to a mild inflammation of the gall-bladder. Experimentally gall-stones can be produced in three ways:

(1) By the introduction into the gall-bladder of chemical irritants. These will produce a desquamation of the epithelium with a congestion in the vessels of the submucosa and an increased secretion of mucus, the bile remaining sterile.

(2) By the injection into the gall-bladder of attenuated bacteria, especially when accompanied by some obstruction to the outward flow of bile.

(3) By the introduction of a foreign body, plus attenuated bacteria.

How are similar conditions brought about in the living human gall-bladder? There is no conclusive proof that chemical irritants exist in the gall-bladder as a result of constitutional derangements or diathetic conditions totally apart from microorganisms, still it is possible that such irritants exist due solely to disturbances of metabolism. Furthermore, such disturbances may modify the composition of bile in such a way as to aid materially in bringing about cholelithiasis.

In a normal human being bile is sterile, or nearly so. When pathological conditions are present in any part of the body bacteria are likely to be present in the bile, and any hindrance to the free flow of bile into the duodenum is followed by a speedy ascending infection from the duodenum. Given attenuated bacteria in the gall-bladder and some obstruction to the free flow of bile into the duodenum, we have the ideal conditions for producing gall-stones. The organisms most commonly concerned in the formation of gall-stones are (1) the bacillus coli, (2) the bacillus typhosis, (3) streptococcus pyogenes, (4) staphylococcus pyogenes aureus, and (5) the bacillus subtilis.

The colon and typhoid bacilli are the organisms concerned in the formation of cholesterolin calculi; strepto- and staphylococci in the formation of calculi consisting of only calcium salts; the presence in the gall-bladder of both groups of organisms rise to a mixed stone, consisting of both calcium salts and cholesterolin.

The above organisms reach the gall-bladder in two ways:

(1) Along the common duct to the duodenum. This is probably the most frequent route. The bacillus coli is the most

common inhabitant of the gall-bladder. It is usually present in small numbers in the duodenum; so long as bile is expelled at regular intervals few germs will enter the bile duct, but should there be any stagnation to the flow of bile, there is a speedy invasion of organisms.

(2) By the blood current. Here we especially consider the portal vein. Adami is of the opinion that colon bacilli are constantly finding their way into the finer branches of the portal circulation, and that these bacilli are destroyed by the liver cells; if, however, the toxic products of bacteria disable the activity of the liver cells, the bacteria may then reach the bile and spread through the gall-bladder and bile ducts.

Should bacteria gain entrance to the general circulation, then they may reach the liver either through the portal vein, the cystic or hepatic artery. Even then it is probable that the bile would be seldom infected, owing to the bactericidal action of the liver cells. Yet it is highly probable that we do have infection of the bile through the blood stream, and, specially, the portal vein. The colon bacillus and the bacillus typhosus are the organisms which most frequently find entrance to the gall-bladder by this route. The part played by inflammatory lesions is probably a very important one. Typhoid fever and appendicitis are the two most common inflammatory conditions preceding cholelithiasis. It is a common occurrence to remove a diseased appendix and gall-stones at the same operation.

ETIOLOGY OF GALLSTONES

Age.—While gall-stones may be present at any age (even in the new-born) 50 per cent. occur in persons over forty, and they are rare under twenty-five.

Sex.—Seventy-five per cent. of cases occur in women. Pregnancy probably has some influence in producing gall-stones, as 90 per cent. of women suffering from gall-stones have borne children.

The following conditions favor the stagnation of bile and hence favor the formation of gall-stones: tight corsets, enteroptosis, nephroptosis, forward position as necessitated by osme occupations, lack of exercise, over eating and depressing emotions.

Symptoms and physical signs of gall-stones: We shall consider these under five headings:

- (1) Pain.
- (2) Nausea and vomiting.
- (3) Jaundice.
- (4) Tumor.
- (5) Fever.

Pain is either local or referred. Localized pain may be either of dull, aching

character, due to an increased tension and inflammation, limited to the gall-bladder, or it may be an acute excruciating pain, due to a more intense infection and an inflammation extending beyond the confines of the gall-bladder. This is usually brought about by an increasing tension in the gall-bladder or cystic duct, due to the impaction of a stone in its attempt to pass out of the gall-bladder. This pain is diffused over a large area along and below the margin of the liver. These two types of localized pain are associated with distinctly different pathological conditions. As already stated, the first and mild type is associated with a slight amount of increased tension and a mild infection confined to the gall-bladder and cystic duct, while the diffuse pain indicates a more severe infection and an involvement of the peritoneum.

The tenderness associated with the above condition is usually not great, and by exerting gentle pressure with the open hand the whole area can be examined without hurting the patient. In fact, the local pain in cholelithiasis is often relieved by pressure. However, if a sudden pressure be made, the muscles respond by instant rigidity to protect the underlying structures from injury. In these mild cases the best method of eliciting gall bladder hypersensitiveness is to place the thumb or fingers beneath the costal arch, then instruct the patient to take a deep breath. The diaphragm forces the liver down and the moment the sensitive gall bladder reaches the examining finger the inspiration ceases. If at the same time the liver itself is tender, the pain induced by the above method will sometimes extend over the entire region. Also there are many cases in which liver tenderness is manifested by rigidity of the muscles of the anterior abdominal wall on the right side, which is best observed by noting the difference in tension in the upper part of the right and left rectus.

The mild degree of localized pain, just described, is often aggravated by taking food. This with the dull aching character, relieved as it almost always is by vomiting, corresponds so closely with the discomfort met with in certain diseases of the stomach that the conditions may be readily mistaken for one another. The pain is due to the gradual increase in tension of the gall bladder as a result of stone impaction. When the patient vomits, the act of vomiting is followed by a general relaxation, during which the stone falls back into the gall-bladder and the pain is relieved. Thus in reality the pain is relieved by vomiting.

The two varieties localized pain above described are found to accompany a pretty

definite pathology. In both cases the pain is due to inflammation, and the inflammation is due to irritation produced by the gall-stone. When the impaction and irritation are of brief duration the inflammatory reaction is slight; when, on the other hand, the impaction is prolonged, the inflammatory reaction becomes more intense and the pain therefore more severe and the peritoneal covering of the gall bladder and bile ducts are more widely involved. Now if the abdomen of a patient, who has suffered from the dull, aching pain for years, is opened, the walls of the gall bladder are found to be thickened, tough and fibrous, with little or no evidence of surrounding peritonitis. Again, on opening the abdomen of a patient who has suffered for years and who has had repeated attacks of the more severe type of local pain with rigidity of the rectus, we find dense adhesions in which the gall bladder and surrounding structures may be matted together, showing that there has been an extensive peritonitis.

Referred Pain.—In association with the above described pain we have also to consider referred pain in gall-stones. This variety of pain, while usually accompanying localized pain, sometimes occurs by itself, and, vice versa, sometimes the localized pain occurs without the referred pain. The latter is much the more common.

The referred pain radiates usually to the right scapular region, rarely to the left, to the neck, down the arm and to the epigastric region. An area of referred tenderness is many times found in the back on a level with the twelfth dorsal vertebra, about one and a half inch to the right of the spine. Boas attached great importance to the tenderness over the posterior surface of the liver and asserted that, if once present during the acute attack, it was invariably present in the intervals.

The location of referred pain is of some value in locating the position of the stone. In this connection the observation of Murphy is most interesting. He made repeated soundings after cholecystotomy and arrived at the following conclusions: Irritations in the pelvis of the gall bladder or in the cystic duct produced pain in 70 per cent. of cases in the right subscapular region, and in 20 per cent., in the front of the chest as high as the neck.

Our discussion of the pain produced by gall-stones could not be considered complete without some reference to gall-stone colic. Colic, here as elsewhere, is characterized by the abruptness of its onset and the suddenness of its relief. We have not the space here to discuss the theories of the

production of colic, further than to say that we do not believe it to be produced by an inflammatory condition, or there would not be the above predominating symptoms. On the other hand, there may be a virulent infection without colic. Personally I believe that in nearly every case the gall-stone colic is associated with the passage of a foreign body of one kind or another through the bile ducts, and that the essential elements in its production is an obstruction, to overcome which there is an increased spasmodic exertion of the muscular coats of the gall-bladder and bile ducts. Should the foreign body be so small that it will pass on without any obstruction, there will be no colic, and, on the other hand, should the foreign body be so large that it becomes fixed in the passage, the muscles will soon cease their efforts to expell it.

(2) **Nausea and Vomiting.**—Moynihan tells us that indigestion is the most common symptom of cholelithiasis, and that the nausea and vomiting follow as a natural sequence. Whatever the cause may be, we know that a stone passing from the pelvis of the kidney to the ureter, and a stone passing from the gall-bladder to the cystic duct will produce nausea and vomiting with great prostration. Repeated attacks of nausea and vomiting should surely lead to an examination of the patient for gall-stones, especially for the tenderness above referred to.

(3) **Jaundice.**—From a surgical point of view, we are only interested in obstructive jaundice, and in our consideration of gall-stones we try to differentiate the jaundice produced by stones from that produced by other conditions giving rise to obstruction in the bile ducts.

It is to be remembered that jaundice has nothing to do with gall-stones, while they remain in the gall-bladder. It is only after they leave their natural habitat and begin to traverse the bile ducts that they produce jaundice. (Exceptions to this are found in infection, and in stones in the gall-bladder producing pressure on the common or hepatic duct). The experience of observers in regard to the frequency of the occurrence of jaundice in gall-stones differ greatly. Murphy found only 14 per cent., while Wolff found the symptom in 50 per cent. of his cases.

There are two causes for jaundice in cholelithiasis:

(1) **Infection.** When an infection accompanies gall-stones situated in the gall-bladder, and the inflammatory process spreads to the common and hepatic ducts, causing a thickening of the mucosa, an incomplete block to the passage of bile re-

sults. Such a case will usually give a history of previous attacks of colic without jaundice and in a few days the jaundice will disappear without any marked general disturbance.

(2) Impaction of a stone in the common or hepatic duct, or, rarely, of a large stone in the cystic (sometimes in the gall-bladder itself.), causing pressure on the common or hepatic duct.

It is not within the scope of this paper to consider all the causes of paundice and their special characteristics, but we will briefly outline the more important features of obstructive jaundice caused by gall-stones.

(a) It is nearly always preceded by colic. The pain comes on a few days or hours before the jaundice appears, and in most cases there is a rough proportion between the severity of the colic and the intensity of the jaundice.

(b) The jaundice appears gradually and deepens more or less rapidly according to the completeness of the obstruction.

(c) If the obstruction is relieved the jaundice after attaining a certain intensity passes away gradually. If, on the other hand, the stone becomes impacted in the duct, and the duct dilates behind it, a ball valve action results and we have a remittent jaundice (one varying in depth of tinge, but never clearing completely). In this condition the degree of jaundice may vary daily or almost hourly, from a slight tinge in the conjunctivæ and skin over the abdomen to a well marked general icterus.

(4) Tumor.—In cholelithiasis we may have a tumor of the gall-bladder in any of the following conditions:

(a) A block in the cystic duct. This may be due to a stone in the duct, a lymphatic gland, enlarged by infection from the stone containing gall-bladder, pressing on the duct, or by torsion or flexion at the neck of the gall-bladder. When stone is impacted in the pelvis of the bladder, or in the cystic duct, the gall-bladder distends behind the block. In the early stages of obstruction the fluid contained in the gall-bladder will be tinged with bile, but before very long the fluid content will be clear or mucoid (hydrops of the gall bladder). Should infection occur, the fluid becomes purulent and we have the condition of empyema of the gall-bladder.

(6) Obstruction of the common duct caused by enlargement of the head of the pancreas. This enlargement may be either due to simple inflammation or to malignant growth. We have already noted the close relation existing between the head of the

pancreas and the second portion of the duct. Later on we shall see that gall-stones are a frequent cause of disease of the pancreas. A gall-bladder distended from this or other pressure on the common duct will contain bile.

(c) In rare cases the gall-bladder may be so crowded with stones that it becomes sufficiently dilated for one to palpate it through the abdominal wall. Cases have been reported where the observer has been able to grasp the gall-bladder and to feel the stones rubbing together.

Malignant diseases of the gall-bladder may give rise to palpable tumor and is usually the result of gall-stones.

In this connection it is well to note that we seldom have a distended gall-bladder from obstruction of the common duct caused by gall-stones. The most satisfactory explanation of this is, that in nearly all cases in which there is a persistent jaundice caused by gall-stones the oft repeated attacks of infection produce inflammatory changes which result in a thickening of the walls of the gall-bladder and a consequent diminution of its cavity. Sometimes the cavity is so small that it will not admit the finger or even a probe. As Moynihan says, "Distention of such a gall-bladder is a physical impossibility." Persisting jaundice associated with distension of the gall-bladder is in over 90 per cent. of cases caused by obstruction of the common duct by pressure from without, and the most frequent cause of such pressure is carcinoma of the head of the pancreas.

Courvoisier's Law.—"The cause of jaundice due to blockage of the common duct, a contraction of the gall-bladder, signifies that the obstruction is due to a stone, a dilatation of the gall-bladder that the obstruction is due to a cause other than stone."

The tumor produced by enlarged gall-bladder forms a prominence which in some instances is visible on inspection, but which in many more cases can be readily appreciated by palpation and often gives the impression of a tumor lying just beneath the abdominal wall. It is generally pear-shaped, but it is sometimes more elongated in form, is smooth in contour and may be pretty freely movable, swinging from side to side. Sometimes it can be pushed into the left hypochondrium. It is usually somewhat tender and sometimes handling it will produce a feeling of nausea. The edge of the liver can be felt immediately above the tumor.

The tumor may be felt to move with deep inspiration and it will be observed that when the liver ascends in expiration the tumor will move upward with the liver

and that it is impossible to keep it down. This differentiates it from tumor of the kidney, stomach and omentum, all of which can be held downward if grasped at the end of deep inspiration. If the colon is inflated it is found below, or rarely, beneath the mass. Moynihan, Tait and Lucke have described cases in which either the colon or small intestines were adherent to the edge of the liver above the gall-bladder. Inflation of the stomach will displace the tumor upward and to the right, and by pushing it against the abdominal wall will make it more palpable.

It is worthy of note that the size of the tumor is not always a criterion as to the size of the gall-bladder, for a large part of it may be concealed by the liver. In some cases of cholelithiasis the lower edge of the liver is dragged to the right and in front of the gall-bladder forming what is known as the "linguiform lobe of Reidel." If there has been an extensive inflammatory process there may be a mass of omentum over and around the gall-bladder which will diminish the distinctness of its outline, and in some persons there is normally a thick omentum over the gall-bladder which will act in the same way.

In many cases of cholelithiasis when a stone is passing down the ducts, the liver becomes markedly enlarged and tender. After the attack the hepatic enlargement will recede rapidly and completely. Should this recession not take place after the attack is completely over, we should suspect either abscess or carcinoma.

(5) Fever.—If one takes the trouble to examine a number of temperature charts of patients who have suffered from infection from gall-stones, he will find that the most prominent feature is abruptness of change. The temperature rises rapidly, reaches its maximum and then returns abruptly to normal, and remains so until there is a fresh attack, when the same phenomenon is repeated. When the gall bladder is the seat of infection, or is the structure principally affected, the temperature will rise to 101, 102 or 104. Moynihan designates such a chart as the "steeple" chart. Rigors sometimes occur and we may have an acute cholecystitis or even a phlegmonous cholecystitis, with the patient in a most serious condition. Should suppuration occur, there will be a continuous elevation of temperature.

In regard to the diagnosis of cholelithiasis, the surgeon's full duty is by no means accomplished when he is able to say that the patient has a biliary calculus. He must determine if possible the situation of the calculus and carefully consider what patho-

logical changes have probably taken place. Such a diagnosis is only possible when, first a complete clinical history has been taken. In many cases, if the patient can give an intelligent account of his trouble and such an account is diligently sought by the surgeon, it is often possible from the anamnesis alone not only to diagnose biliary calculi, but to follow step by step the pathological changes as they have taken place. The character of his indigestion, character and location of pain, attacks of colic, chills, fever and jaundice. Secondly, a thorough examination. This examination should include (1) inspection of the entire body, the patient placed in the recumbent position, abdomen stripped, head resting on a pillow and at first, the legs extended, mouth open and muscles relaxed as much as possible. At first the patient should be asked to breathe naturally and later encouraged to take deep breaths. The character of the respiration is noted, also the presence or absence of icterus. A distended gall-bladder pushes the abdominal wall forward. If an active inflammatory process is present in or around the gall-bladder the upper portion of the abdomen is seen to protrude. If the patient is thin, the gall-bladder may be seen to rise and fall with the respiration.

(2) Palpation.—This is the most valuable means we have of examining the abdominal viscera, especially bimanual palpation. With the patient still on the back with the knees flexed, the surgeon stands on the patient's right, and places the left hand flat in the right lumbar region, and the right hand over the gall-bladder. By pressure with the left hand, the liver and gall-bladder can be brought against the anterior abdominal wall and, if enlarged or distended, can be felt with the right hand without the necessity of exerting sufficient pressure to produce contraction of the abdominal muscles.

A tumor, if present, is nearly always tender (exception, hydrops of the gall-bladder.) The tumor moves with the respiration and will always return to its place with expiration.

In the cases in which the gall-bladder possesses a mesentery it may be extremely movable, the examiner being able to move it from side to side as if it were swinging on a pendulum.

A movable kidney has its own characteristic shape, can be held down on expiration, and when let loose, has a characteristic way of slipping back into place. If the colon be distended with air a movable kidney will usually disappear, while a tumor of the gall-bladder is likely to be displaced upwards.

If the stomach be distended with air, a tumor of the gall-bladder will be displaced upward and to the right. Examination of the gastric contents will also aid in differential diagnosis. Furthermore, in cases of the tumor of the colon or stomach, the tumor can readily be prevented from following the diaphragm on expiration. This, as we have already seen, is not so in the case of the gall-bladder.

An echinococcus cyst developing in the neighborhood of the gall-bladder can readily be mistaken for a tumor of the gall-bladder, though in most cases a carefully taken history will show that there has been an absence of pain and a steady growth of the tumor. I have seen one case of a suppurating hydatid situated immediately to the left of the gall-bladder, and associated with jaundice, colic and chills.

It would go far beyond the confines of this paper to give any detailed account of the differential diagnosis in some of the more obscure cases of cholelithiasis. Suffice it to say that investigation should be carried on along the lines indicated above.

Complications of cholelithiasis:

(1) Acute Perforation of the Gall Bladder.—This condition is marked by the same symptoms as are other such surgical calamities, as perforation of the stomach, duodenum, pancreas and appendix. The material which escapes from the gall-bladder tends to gravitate down to the appendical region and the diagnosis of perforative appendicitis is often made. A careful history and the location of the early symptoms will usually lead to a correct diagnosis.

(2) Fistulous Communication Between the Gall-Bladder or Bile Ducts and the Gastro-Intestinal Tract.—These usually close spontaneously, but sometimes may cause abscess, especially when in the vicinity of the pylorus. Fistulæ sometimes lead to the surface of the body, and in such cases there is usually a calculus lodged either in the gall-bladder or in the ducts.

(3) Adhesions or bands may limit the function of the gall-bladder and give rise to pain.

(4) Strictures of the ducts may also occur and require operative treatment.

Pancreatic involvement is so common and important a complication of gall-stone disease that I would like to call very special attention to it.

We have seen the close relation existing between the duodenum, liver and bile ducts, and the pancreas. The liver, its ducts and the pancreas are developed from outgrowths from the duodenum. The anatomic relations of the common duct, in its second portion, to the pancreas; the rela-

tion of the common duct to Wirsung's duct within the wall of the duodenum; the mingling of their secretions in the ampulla of Vater before entering the duodenum, where their combined secretions mix with the probably very powerful secretion of the duodenal glands, would almost lead one to speak of the combined structures as the "duodenum and its adnexia."

Before considering the pathological conditions of the pancreas, let us briefly review a few of the more salient anatomical and physiological facts concerning the pancreas. We have already seen that it is developed from two processes which grow from the duodenal end of the mesogastrium and that this primitive form is retained to the extent that the fully developed pancreas has two ducts. The most important anatomical facts regarding the organ are:

(1) Its intimate relation to other structures, especially the duodenum and bile ducts.

(2) Its very rich blood supply; being the most active of the digestive glands, its blood vessels are large and numerous.

(3) The delicacy of its frame work.

Its close relation to other structures and the delicacy of its framework, together with the activity of its secreting cells, render it difficult of manipulation.

Without going into the details of the physiology of the pancreas, suffice it to say that its secretion is the most powerful of the digestive juices, and that if for any reason there is an escape of this secretion into the parts surrounding the gland, fat necrosis and active digestion of the tissues, with which the juice comes in contact, ensue, resulting in a good culture medium for any germs that may be present. The healthy peritoneum can deal with many germs, but when pancreatic juice is free in the peritoneal cavity, the peritoneum has lost to a very great extent its power of resistance and what would otherwise prove a mild and passing irritation may thus become an acute inflammation. Even without the presence of germs, the pancreatic secretion will, according to Miculicz, produce an aseptic peritonitis with adhesions. It is obvious from the above facts that in all cases of injury to the pancreas free drainage and protection of surrounding structures is important.

We will divide pancreatitis, for convenience of description into three varieties:

(1) Acute Hemorrhagic.—While age, sex, parturition and alcohol probably all play some part in the production of acute hemorrhagic pancreatitis, it is probable that gall-stones are after all the most common cause. They may produce pancreatitis in

any one of three ways:

(a) By lymphatic extension.

The following case, which came under my observation about 15 months ago, illustrates this mode of origin. The patient was suffering from a severe attack of hepatic colic. On opening the abdomen numerous patches of fat necrosis were at once observed there was a small quantity of blood stained fluid in the peritoneum, the gall-bladder full of stones and the pancreas greatly swollen. There were no stones in the common duct, nor in the ampulla of Vater. This I believe was a case of lymphatic extension. The gall-bladder was aspirated, drawing off several ounces of pus, and over one hundred stones were removed. The gall-bladder was drained and the patient made an uneventful recovery.

(b) By being lodged in the duodenal papilla. This, we have already seen, converts the common bile duct and the duct of Wirsung into a closed channel and the bile readily finds its way along the duct of Wirsung. It has been proven by experiment that normal bile in the pancreatic ducts will produce acute hemorrhagic pancreatitis. In the following case acute pancreatitis was produced in this manner.

A young man was suddenly taken ill with all the symptoms of intestinal obstruction. He gave a history of having been operated upon for gall-stones some months previous to the attack, but none were found. Before consent for operation could be obtained, the patient died, less than 48 hours from the onset of the attack. At the post mortem a small gall-stone was found in the papilla, completely blocking the flow of bile into the duodenum. Bile was found all along the duct of Wirsung; the pancreas was swollen and there were numerous hemorrhages into the substance.

(c) When a stone becomes lodged in the second part of the common duct, and infection in the duct results, the pancreas from its very close relation to the duct may become inflamed by direct extension.

Acute pancreatitis should be suspected when a patient is suddenly seized with acute pain in the epigastrium, followed in a short time by vomiting and collapse, and in the course of 24 hours by a circumscribed swelling in the epigastrium, though this last symptom is entirely absent in some cases or the abdominal wall is so rigid that it is hard to elicit. Moynihan is inclined to attach importance to lividity of the skin, suffused face, cold and damp body surface and blue lips. Many cases will only be diagnosed after the abdomen has been opened, as the symptoms produced by the disease are so similar to those caused by other serious

acute conditions, e. g., perforating ulcer of the stomach or duodenum, acute intestinal obstruction, thrombosis of the superior mesentery artery, that a provisional diagnosis only can be made.

In cases of acute pancreatitis occurring with acute cholangitis, I have never observed any symptom in itself suggestive of pancreatitis, but as a general thing the attack is a severe one. When the abdomen is opened the diagnosis is readily made. There is always some blood stained fluid in the peritoneum, patches of fat necrosis and the pancreas itself will be soft and swollen.

Subacute Pancreatitis.—When the infection is not sufficiently severe to produce the condition described above, the process may go on to abscess or to gangrene. The symptoms differ then only in degree from those described above.

Chronic Pancreatitis.—This condition is most commonly brought about by the lodgment of a stone in the pancreatic portion of the common duct, sometimes also by a stone lodged in the papilla; but while gall-stones are the most common cause, it must be remembered that pancreatic calculi, typhoid, duodenal ulcer, alcohol, tumor pressing on the duct from without—any of these may be responsible for chronic pancreatitis. My experience with the condition, so far as it has been confirmed on the operating table, has been confined to cases associated with gall-stones, with possibly one case of duodenal ulcer.

Pathology.—Two forms of chronic pancreatitis have been described by Opie:

(a) Interlobular, in which fibrous tissue separate the lobules of the gland.

(b) Interacinar, in which fibrous tissue is found within the lobules. In this variety the islands of Langerhans are also affected and consequently we have metabolic as well as digestive disturbances.

Symptoms.—In the milder grades the symptoms are so ill defined that a positive diagnosis is impossible. The history may be exactly that of gall-stones or of biliary infection. Deaver reports cases presenting all the characteristics of biliary intermittent fever. Moynihan has in some cases found a chronic pancreatitis when he had made a diagnosis of duodenal ulcer.

The following train of symptoms should lead us to strongly suspect chronic pancreatitis: (a) a sense of fullness in the epigastric region, (b) pains radiating to the left side of the abdomen and chest, (c) pale pultaceous stools, (d) wasting more or less rapid. Sometimes there is jaundice, and sometimes diabetes.

Cambridge's reaction, if it is to be taken seriously, requires a very experienced labo-

ratory man, and even then I believe it is doubtful utility.

Surgical treatment of the above conditions.—In any case where it is possible to diagnose gall-stones, I believe unequivocally that they should be removed. "Harmless" gall-stones do not exist. If it is true that a chronic irritation is an exciting cause of cancer, and that 95 per cent. of cancerous patients have stones, then surely the presence of stones in the gall-bladder will act as an exciting factor to the growth of malignant disease. Furthermore, we have seen that gall-stones will produce both acute and chronic pancreatitis with all that may result therefrom.

Any one of the following operations may be necessary for the cure or relief of the condition:

- (1) Cholecystotomy.
- (2) Cholecystectomy.
- (3) Cysterectomy.
- (4) Choledochotomy.
- (5) Incision and drainage of the pancreas.

There has been much discussion as to the relative value of the first two, some writers going so far as to eliminate cholecystotomy entirely, while others believe that it will always have a prominent place in gall-bladder surgery. Personally I believe that it is the preferable operation for most cases of gall-stones, and for the following reasons:

(1) We have already seen that the gall-bladder has two functions. While neither of these functions may be especially essential, yet they probably are of more or less value.

(2) The mortality of cholecystectomy is one-third of one per cent. higher.

(3) In gall-stone disease of the common duct infections are especially liable to occur after removal of the stones; drainage is therefore essential and the gall-bladder is the most reliable guide to the common duct.

(4) Should stricture of the common duct occur cholecyst-enterostomy usually affords the readiest method of relief.

However, when the gall-bladder is seriously damaged and the cystic duct is not sufficiently free to admit of efficient drainage, cholecystectomy is the better operation. There are many cases, in the debilitated, and aged, where removal of the gall-bladder would be desirable, but the patient's condition is such that all that can be safely done is to open and drain the gall-bladder.

Both of these operations are too well known to require description here. Drainage is the essential feature in all cases of infected bile ducts and pancreas, and for this

reason I prefer to keep the drainage tube in place for two or three weeks after operation. This is especially true in cases of pancreatitis. Should the gall-bladder lie underneath the right lobe of the liver a counter incision should be made in the loin to admit of drainage of Morrison's pouch before it overflows into the general peritoneal cavity. In cases where the gall bladder is thin walled and distended with foul smelling colon bacillus pus we have a subacute cholecystitis with a strong tendency to recurrence. In such cases it is well to unite the gall-bladder to the external sheath of the rectus, or even to the skin, as the fistula thus formed is very slow to heal, and should there be a relapse, the discharge will readily find its way to the surface.

Cholecystectomy is indicated in all cases in which the cystic duct does not afford efficient drainage; in cases where the gall-bladder is thickened, or is the seat of malignant disease; when there are multiple ulcerations of the gall-bladder; in cases of fistulae between the gall-bladder on the one hand, and the stomach, duodenum or colon on the other, and where stones are found for the second time in the gall-bladder.

If during an attack of acute cholecystitis an operation is performed, and the gall-bladder is found in such a condition that its removal is desirable, it is sometimes safer to do first a cholecystostomy, and to remove the gall-bladder later, when the infectious process has subsided.

Cysticotomy.—The removal of stones from the cystic duct through an incision which is subsequently sutured, or into which a drainage tube is inserted, is an operation which is occasionally performed.

Choledochotomy.—This operation is performed for the removal of stones in the common duct. They may be situated in any one of its three parts, or stone may be in the transduodenal, or pancreatic portion, while another is in the supraduodenal part of the duct. When a stone is lodged in the suproduodenal portion of the common duct the operation is as a rule easy, if the patient is in a proper position (sand bag behind the patient's liver, table tilted so that the feet are lowered 4 or 5 inches, and the head elevated to a corresponding degree) and the liver is pulled down and rotated so as to bring the common duct nearly, if not quite, on a level with the skin. In fat patients the duct cannot be brought to a level with the surface, but if the liver is properly rotated, it will be brought so far forward that the duct can readily be opened and explored with the finger, probe or scoop, and drain provided. After this operation is probably always well to drain the duct, and this

can be accomplished in one of two ways, direct and indirect. In many cases a stone can be removed through this incision, though located either behind the duodenum or in the duodenal wall.

When a stone is lodged in the retroduodenal portion of the common duct, in the great majority of cases it can be brought back to the supraduodenal portion and removed as already described. There are, however, a certain number of cases in which this cannot be done. In such cases it is necessary to mobilize the duodenum and thus expose the duct from behind. This is done in the following way: Expose and identify the common duct as described, incise the parietal peritoneum of the posterior abdominal wall vertically about one and a half inch to the right of the duodenum, introduce the finger into this incision and strip up the peritoneum until the duodenum is reached. By gently pulling on the second part of the duodenum it can be turned over to the left so that its posterior surface becomes visible. Stones situated in the second portion of the duct can now be readily felt and the duct over it incised. It is to be remembered that the pancreas is here in intimate relation to the duct and must be cut, or carefully separated from it; also that the duct has no peritoneal covering here, which makes leakage almost inevitable and drainage essential.

If a stone is lodged in the third portion of the duct, the duodenum is opened by a vertical incision one inch, or more, in length, the edges of the incision grasped with vulsella and held apart. Incise the mucosa, and if necessary, slit up the lower end of the duct and remove the stones with a scoop.

In acute pancreatitis the pancreas will be found engorged with blood, soft and swollen. Expose the gland freely by tearing through the gastrohepatic omentum, make a number of small incisions into the gland, pack them with gauze, and have the end of each gauze strip come through the incision. Examine the gall-bladder and ducts. If gall-stones are present remove them, unless they are in the ampulla of Vater, in which case it is better to drain the gall-bladder and remove the stones at another time, if they do not pass on into the duodenum. Then if the patient's condition will permit, make a second incision in the cost-vertebral angle, expose the posterior surface of the pancreas, make multiple incisions into the gland here and drain through the posterior incision also.

The results reported by Moynihan and Miculicz, while still showing a high rate of mortality, are very much better than

when no operation has been performed.

In subacute pancreatitis make an incision between the ensiform cartilage and the umbilicus. Usually a deep seated mass can at once be felt in the epigastric region. Tear through the gastrohepatic omentum, locate the part of the pancreas most involved—usually there will be a well defined abscess—and carefully protect the peritoneum by a double layer of large abdominal cloths. Open the abscess and wipe away all the pus and slough that can be removed; sometimes large pieces of the pancreas will come away, but this, according to Moynihan, interferes neither with the immediate recovery of the patient nor with his metabolism later on. Having localised the abscess through the anterior incision, some prefer to close the abdomen and make a second incision in the costo-vertebral angle, and drain through this incision. My experience is limited to one case; in this drainage was established from the front and the patient made a good recovery. Sometimes if the patient is kept lying on the face, it will drain better.

In chronic pancreatitis the treatment will necessarily vary with the cause. Stones in the pancreatic or common duct must be removed, gastric or duodenal ulcers treated by incision or gastroenterostomy as may seem best in any given case. Drainage of ducts for a sufficient length of time to allow them to free themselves of infection is the all important part of the treatment. This, I think, can best be accomplished by doing a cholecystomy. This operation drains the ducts to the surface, whereas if cholecystenterostomy is performed the gall-bladder may be constantly reinfected from the intestines, and if in addition to this a lateral anastomosis is done to lessen the probability of infection, the operation is unnecessarily prolonged and the possibility of reinfection still exists.

The only point is to keep the fistula open as long as possible. The earlier this treatment is instituted the better are the chances of permanent recovery. If sclerosis of the liver and pancreas has already taken place, the operation, though it may successfully free the ducts from infection, can never cure the cirrhosis which has developed in these organs.

600 West 116th Street.

Practical Infant Feeding.

By H. C. Grant, M. D., Crozet, Va.

To claim to have found anything new in infant feeding would be like claiming to have found a new color in the rainbow.

However the following formulas which

I got from Dr. J. E. Winters of New York have assisted materially in solving the problem of bottle fed babies for me and I hope they may be useful to others. Mother's milk and cow's milk can be made practically identical after the second week.

The success of the following formulas, lies in the fact that after milk stands for twelve hours the top milk when diluted with water, as for feeding, yields an immense number of finely divided light, feathery flocks, which float in the solution and are easily reduced to a semi-emulsified condition. Deeper layers contain larger and tougher curds, which on stirring stick together and sink.

The plan I have adopted is to get the mother to set aside a half gallon of night's milk and after it has stood for twelve hours to take off with a skimmer enough milk with the cream to make the following formulas.

1st, 2nd and 3rd days.

Top milk, 1 oz.

Milk sugar (Merks), 6 level teaspoonsful.

Col dunboiled water, 4 oz.

Lime water, 1 oz.

Make 10 bottles feed every 2 hours.

4th, 5th, 6th and Seventh Days.

Top milk, 1½ oz.

Milk sugar, 6 teaspoons.

Water, 6½ oz.

Lime water, 2 oz.

10 bottles feed q 2 h.

Second Week.

Milk 2½ oz.

Milk sugar, 6 teaspoons.

Water, 10 oz.

Lime water, 2½ oz.

10 bottles of 1½ oz. every 2½ h.

Third Week.

Milk, 4 oz.

Milk sugar, 6 teaspoons.

Water, 12 oz.

Lime water, 4 oz.

8 bottles of 2 oz q 2½ h.

Fourth Week.

Milk, 5 oz.

Milk sugar, 6 teaspoons.

Water, 11 oz.

Lime water, 4 oz.

8 bottles of 2½ oz. q 2½ h.

Fifth Week.

Milk, 6½ oz.

Milk sugar, 6 teaspoons.

Water, 13½ oz.

Lime water, 4 oz.

8 bottles of 3 oz. q 2½ h.

Sixth Week.

Milk, 7 oz.

Milk sugar, 6 teaspoons.

Water, 13 oz.

Lime water, 4 oz.

8 bottles of 3 oz. q 2½ h.

Seventh Week.

Milk, 7½ oz.

Milk sugar, 6 teaspoons.

Water, 12½ oz.

Lime water, 4 oz.

8 bottles of 3 oz. q 2½ h.

Eighth Week.

Milk, 8 oz.

Milk sugar, 6 teaspoons.

Water, 12 oz.

Lime water, 4 oz.

8 bottles of 3 oz. q 2½ h.

Ninth and Tenth Week.

Milk, 8oz.

Milk sugar, 6 teaspoons.

Water, 12 oz.

Lime water, 4 oz.

8 bottles of 3 oz. q 2½ h.

Eleventh and Twelfth Week.

Milk, 11 oz.

Milk sugar, 6 teaspoons.

Water, 13 oz.

Lime water, 4 oz.

7 bottles of 4 oz. q 3 h.

Thirteenth Week.

Milk, 13 oz.

Milk sugar, 6 teaspoons.

Water, 11 oz.

Lime water, 4 oz.

7 bottles of 4 oz. q 3 h.

Fourth Month.

Milk, 15 oz.

Milk sugar, 6 teaspoons.

Water, 9 oz.

Lime water, 4 oz.

7 bottles of 4 oz. p 3 h.

Fifth Month.

16 oz. milk.

Milk sugar, 6 teaspoons.

Water, 12 oz.

Lime water, 4 oz.

7 bottles of 4½ oz. q 3 h.

Sixth Month.

Milk, 18 oz.

Milk sugar, 6 teaspoons.

Water, 11 oz.

Lime water, 4 oz.

6 bottles of 5½ oz. q 3½ h.

After the sixth month give barley water in Summer and oat-meal water in Winter. It must be added to each feeding just before heating it for feeding and not to the whole quantity of formula.

In making barley use Robinson's barley flour and use 2 teaspoons to pint of water and boil for 15 minutes.

Seventh Month.

Milk, 22 oz.

Milk sugar, 6 teaspoons.

Water, 9 oz.

Lime water, 4 oz.

5 bottles of 7 oz. q 4 h.

Eighth and Ninth Month.

Milk, 26 oz.

Milk sugar, 5 teaspoons.

Water, 10 oz.

Lime water, 4 oz.

5 bottles of 8 oz. q 4 h.

Add 2 teaspoons of oat-meal jelly or 1 oz. of barley water to each feeding.

Tenth and Eleventh Month.

(In Summer)

Milk, 30 oz.

Milk sugar, 4 teaspoons.

Water, 16 oz.

Lime water, 4 oz.

5 bottles of 10 oz. q 4 h.

(In Winter)

Milk, 36 oz.

Milk sugar, 4 teaspoons.

Water, 10 oz.

Lime water, 4 oz.

5 bottles of 10 oz. q 4 h.

Add 2 oz. barley water or 1 teaspoon of oat-meal jelly to each feeding.

Twelfth Month.

Milk, 42 oz.

Milk sugar, 4 teaspoons.

Lime water, 4 oz.

5 bottles of 10 oz. q 4 h.

If movements are loose or green, double lime water and decrease cream. In ileocolitis feed barley water alone for a few days. If constipated increase cream by addition of extra cream.

Of 1,000 children, fed on various infant foods, 430 more die in the first year than of 1,000 milk-fed babies. Of these who survive 400 more will be in bad or indifferent health.

Of those who live to adult life almost none are fit for military service.

For these and other reasons a physician should not countenance the feeding of the so-called infant foods before the sixth month at any rate.

The Policy of the Bureau of Tuberculosis of the State Board of Health and the State Tuberculosis Sanatorium*

By L. B. McBrayer, M. D., Sanatorium, N. C.

A person who has been in charge for only two months of as important a work as this would hardly be expected to formulate a policy without stating, as do certain business houses in regard to the price of their products, that the policy is subject to change without notice. However, we have been able to work out certain general policies that it is a great pleasure to give to the

profession of the State and, more particularly, to the health officers of North Carolina, and to all other people who are interested in this particular phase of public health work. We say "to all other people," and that phrase ought to cover the entire population of our State, because few there be whose lives are not touched at some point or other by the dread malady of tuberculosis.

The first thing that was to be done, and that must be continued and improved upon, was the placing of the State Sanatorium on a basis, as regards the conduct of the same physically, medically and hygienically, that will accord with the views of and commend it to the thinking people of North Carolina, the business people, the doctors and the social workers. That we have progressed fairly well in the two months I believe none will deny. However, this is but an earnest of what we hope to do in the future.

It has always seemed to us that when the State does anything, in any line, she ought to do it in as nearly a perfect way as possible, so that it will be an object lesson for good to all the citizens of North Carolina, and elsewhere, for that matter, who may be brought in contact with it. For example, if a State institution is going to conduct a dairy, it would seem that the said dairy ought to be conducted along the latest scientific lines of dairying. If the State is going to conduct, in connection with one of her institutions, fruit growing, it would seem that instead of the Horticultural Department working on an adjoining farm as a demonstration, the State's own property should be used, and used as a demonstration in fruit growing. If it is desired to make experiments in fruit growing, or in hereditary transmissions in fruit growing, why not conduct those experiments at some of the State institutions? In fact, it would seem that every State institution, and especially the State Tuberculosis Sanatorium, should be an institution for original research. Why not? At any rate, it is hoped, as the days go by, that the State Tuberculosis Sanatorium will become a model in every line of its activity. It is hoped that the sanatorium, per se, shall do its work according to the latest approved methods. It is hoped that in everything we do we shall be able to do it in such a manner that it will be a model to which anyone who may desire may go for study or observation. It goes without saying that at such a place the patients would receive the best possible attention and care from every standpoint.

We are now able to offer to the physicians and to the people of the State expert diagnosis in doubtful cases of tuberculosis.

*Read before recent meeting of North Carolina Medical Society.

Our plan is to have the patient come to the sanatorium and stay until we have exhausted, if necessary, every scientific measure known to the medical profession in the diagnosis of each particular case. It is necessary sometimes to keep the patient for some ten days in order to carry him through all the various tests. We have two patients now that we are just finishing. If they are found to have tuberculosis, they will probably be kept there three or four weeks, if they desire to stay until we have taught them thoroughly the hygienic measures necessary for them to employ in order to procure a cure in themselves and to prevent the transmission of the disease to others.

We have established, in connection with the Sanatorium, a training school for nurses. We have at this time four nurses in the training school. We plan to do four things: (1) Give a post-graduate course of a few months to graduate nurses at the close of which, if the work has been satisfactorily done and the studies satisfactorily pursued, they will be given certificates in tuberculosis nursing, giving, at the time they receive their diplomas from the general hospital, to such as have satisfactorily completed this course, a certificate in tuberculosis nursing; (3) Conduct a regular training school for nurses, giving them one year of work in some of the general hospitals of the State, and at the completion of the course giving them diplomas as graduate nurses; (4) Conduct a training school for visiting nurses, and at the close of the course give a diploma or special certificate in visiting nursing. There is a wide opportunity, as well as a wide field for usefulness, for the visiting nurse today. There is also a demand for visiting nurses very far in excess of the supply. I am informed by Dr. Jacobs, Secretary of the National Association for the Study and Prevention of Tuberculosis, that it is impossible to procure visiting nurses sufficient to meet the demand. The field for usefulness in this line of nursing is perhaps much greater than in any other line of work that a nurse can do.

It is hoped, as soon as facilities and clerical assistance can be had, to keep in touch by correspondence with patients who leave the Sanatorium, see that they can obtain sputum cups, pocket flasks and other supplies that are so necessary in the prevention of the spread of tuberculosis, in order that they may carry out the hygienic measures that are taught them at the Sanatorium and not relapse into their former careless methods as regards themselves and others. It is a sad commentary on the State of North Carolina that in a very small number of

towns, comparatively, can sputum cups and pocket flasks be procured for either love or money.

As soon as sufficient funds and clerical assistance can be had, it is hoped that we may enter energetically upon the enforcement of the law requiring cases of tuberculosis to be reported to the State Board of Health. It has been our experience that doctors do not care to go to the trouble and expense to report cases of contagious or infectious diseases unless some good is accomplished thereby. We hope to make it worth while not only to the physicians, but also to the people who have tuberculosis and to the people who do not have tuberculosis, to report these cases. We mean by that that we hope to be of sufficient service to the profession and to the people to make it amply worth while to both of these classes of our citizens to report these cases. This will require some money, as well as a large amount of work. We are willing to do the work, and we hope that when the next legislature meets they will give us the money.

It is hoped in the very near future to offer our services to any community or city or institution to make a complete survey of the city, community, etc., and give them accurate information as to the prevalence of tuberculosis. Such a survey would compromise a systematic study of every human being in the said community. We have not the time now to give you the details of such a survey, but the idea is that when such surveys shall have been completed we shall be able to advise the community, etc., as to the exact number of cases of tuberculosis in the said community, giving their names and addresses. We shall be able to advise them of a second class of people that are below par and that must needs conduct themselves so as to husband their vitality and not expose themselves in any way to tubercular infection lest they come down with the disease. A third class, those that are robust and strong, can, if they desire, go on wasting their vitality and defying the laws of nature with comparatively—comparatively, mind you—little danger of being overtaken by the disease. After this information is in hand, we hope to offer to the community the kindly offices of the State Sanatorium and of the Bureau of Tuberculosis, to the end that the infective cases may be removed from the community, and that the remaining people whose vitality is found to be below par may be kept under observation, to the end that tuberculosis may be stamped out of this community. Of course, it would be necessary then, a few years

later, to conduct again this same careful survey in this community, in order that we might record the results of our work. It is hoped that before this Association shall meet again in annual session we shall have put into operation these ideas in at least one community, and that we shall be able to report to you the work accomplished, in so far as it goes. Then, if we can stamp tuberculosis out of one community, we can stamp it out of a second community, and a third, and so on, until it is driven from our grand old State.

There is much more that could be said, but we trust that this is sufficient to give you a general idea as to the policies of the State Board of Health in regard to the State Sanatorium and in regard to the tuberculosis campaign in North Carolina, the details of which will be worked out from time to time to suit the individual case and the individual problem. If this policy commends itself to the profession of North Carolina and to the thinking people of North Carolina, we have no fear that the legislature will provide us with sufficient funds to carry out these policies, and thereby protect our people from the greatest scourge that the people of North Carolina have ever had.

Treatment of Scarlet Fever.

By I. L. Van Zandt, M. D., Fort Worth, Tex.

"Look, Doctor, it goes in like penetrating oil," were the words of Mrs. George, to whom I had a few minutes before given some Unguentum Cr  d  , to be rubbed into the back of her daughter, about 8 years old, who had been sick some days with scarlet fever. The eruption was quite profuse, her back as red as the proverbial lobster, the glands under the angles of the jaws inflamed, and the tissues very much swollen. I looked and for a moment it seemed I could see the black ointment fading from, or into the skin. I noticed also that the skin as far as touched was absolutely blanched, the redness having entirely gone out of it. This was my first use of Unguentum Cr  d   (a fifteen per cent. ointment of Collargolum) in scarlet fever.

I went back the next day and found the patient very much improved, the fever about gone and the swelling very much reduced. The mother said the change begun about six hours after the ointment was rubbed in. This was about May 1, 1899.

A short time after, I saw another little girl with a very sore throat from scarlet fever. I made several prescriptions without benefit, then prescribed Ung. Cr  d  , with the understanding that I was to be

called the next day if she was no better. The next visit was not made.

I then concluded that if Unguentum Cr  d   could cure these sore throats of scarlet fever, it ought to prevent them, and hence I adopted it as my first treatment in all cases of scarlet fever.

This was fifteen years ago, and in the interval, I have never, where I had the case from the beginning, had a single inflamed ear, and only one suppurating gland, that in a nine or ten months old baby, which already had a "running ear." I have, however, assisted in the treatment of some of these cases which had been given other treatment by others. In all a prompt betterment occurred when my treatment was adopted.

Hence, I am emboldened on the basis of fifteen years' experience, to say that *properly used* COLLARGOLUM IS AS SURELY A SPECIFIC FOR SCARLET FEVER AS IS ANTITOXIN IN DIPHTHERIA.

I know that some of my friends have used it without getting results such as mine, but when I hear of this, I feel sure that the technique of giving was defective, for though I have generally been reputed to be a modest man, I am not modest enough to assume that I have not had in fifteen years what would have been a bad case but for the treatment, while my neighbors have been losing cases, and furnishing in others, work for the aurist.

We all recognize that quinine is good for "malarial" chills, and yet if twenty grains is necessary for a given case and only five is given, or, if twenty is given and vomited, or if twenty is given by injection into the bowel and immediately passed, we do not say that quinine is not good for chills, but we put the blame on the failure in administration.

So a failure to get the collargolum into the blood is, I think, responsible for these failures of others.

I will illustrate this with the experience of a young physician, a nephew of mine, whom I love and esteem most highly as a man and a physician. He is a Johns Hopkins man who stood very high, I think first, in his class, and then spent a year in the hospital after his graduation.

Soon after he began private practice, he treated a case of scarlet fever with collargolum, and had both suppurating glands and ear trouble. I know nothing of his technique in this case.

Later, I saw with him a patient who had a lacerated and contused wound of the scalp, which had become, or most likely was septic from the beginning. I saw him at the end of four days. The wound was discharging pus, the face was red and

swollen, the eyes almost closed, and lymphatic glands down to clavicle showing infection. Temperature 102 or 102½ at 9 a. m. He had had no rest since the wound occurred.

The doctor pointed to the stain on his shirt where the ointment had been rubbed under the arm.

At my suggestion, the hair was cut away from an inch or more around the wound, this area covered with Unguentum Credé, this covered with gutta percha tissue, then gauze or cotton and retained by a bandage.

The bowel was then washed out and twelve grains of collargolum in a teacup of warm water given by enema, the same to be repeated at bed time. The next morning, he reported that he had had a good night's rest, the first since the injury, and was feeling fine. Temperature 101. By the next morning, forty-eight from the time the collargolum treatment was begun, his fever was all gone and he was ready for a hearty breakfast. Two or three days later, without any rise of fever there developed an abscess under a deeper layer of the scalp, about four inches in diameter. Some necrotic tissue being taken out of the bottom of the wound, the pus was discharged, and a rapid recovery ensued.

A few months ago, the doctor told me that his little girl of four had scarlet fever, and asked what to do. I told him to have the Unguentum Credé rubbed in freely. The next day he phoned asking me to come to see her, as she still had 103 temperature.

I went and found that on account of the child objecting, the rubbing had not been done, but the ointment had been pretty extensively smeared over her side. I asked how were her bowels. "Rather constipated," was the answer. "So much the better," says I. Then I directed that the bowel be washed out, and in an hour when it had become quiet, two grains of collargolum in two drams of water be given by enema. This was to be repeated at bed time, both the washing and the medicine.

The next morning temperature was 99, and the patient was feeling fine. The temperature rose to 102½ for a short time in the afternoon, then went down and she was no longer feeling sick at all. The medicine was kept up once a day for about a week. She had no other medicine.

This experience of my friend shows a great difference between giving it properly and improperly.

In scarlet fever, I generally use Unguentum Credé, telling how much is to be rubbed in, laying special stress on the "in." When the skin is hot and dry, it "goes in like penetrating oil," as Mrs. George said.

As to quantity, for an adult administration, I generally direct one-fourth of the half ounce package to be rubbed in once or twice daily, according as there is little or much fever.

When the skin is cool and moist, the ointment does not go in readily, and I prefer the collargolum by enema—generally for an adult, ten to fifteen grains in a teacup of warm water once or twice a day. With children, I use rather more in proportion. I am not afraid to use any amount, as I am sure it is absolutely non-poisonous.

The doctor's little daughter is the only case in the last seven, which I have visited after my diagnosis was made. I have had a very few cases in which a mild fever, less than 100, continued for probably two or three weeks.

I have had only one case of nephritis. This was last winter. The little fellow about six years old, got over his fever with so little weakness that in about ten days he was taken out for a long walk on a cool afternoon, and came back with a nephritis.

Foreign Bodies in the Bladder.

By S. S. Gale, A. B., M. D., F. A. C. S., Roanoke, Va.

Foreign bodies get into the bladder by accident or by intentional means. The variety of objects is surprisingly large, ranging from calculi, pieces of suture, of broken catheters or bougies, bony sequestra, and other substances with more or less legitimate excuse for their presence. There are parts of pencil, straws, glass tubing, beads, wax, chewing-gum, hair-pins—in fact, every available object that may be made to enter into the urethra for the purpose of titillating the feelings and the erotic fancies of masturbators. The hair-pin is a favorite object with the female. These various means are used, perhaps repeatedly, until finally, under the influence of sexual excitement or orgasm, they escape the grasp and are forced into the urethra, when they are pressed into the bladder by the excited efforts at regaining them by the patient.

Haggard found the full skeleton of an ectopic fetus that had ulcerated its way into the bladder of a patient. Dunn found a bony sequestrum nearly an inch long.

In other instances soft catheters are fastened into the bladder but escape from the retention apparatus and find their way into the bladder. A husband lost a catheter in the urethra and bladder of his wife while endeavoring to pass it into the uterus for the purpose of causing abortion. A veterinary surgeon used a willow switch instead

of a bougie for enlarging the caliber of a supposed deep urethral stricture; about three inches of the switch broke off within the bladder, formed the nucleus for phosphatic incrustations, and developed into a stone of large size, requiring removal by suprapubic cystotomy a year later.

This is a frequent outcome of such an accident. The patient, impressed with the shame of his act, fails to ask assistance until months later; the foreign body causes irritation, infection, and cystitis, and he finds further delay impossible.

Diagnosis: Diagnosis can be made occasionally from the history, by passing sounds, by the use of a cystoscope, and X-ray.

Treatment: It was formerly necessary to cut down for removal of all such foreign bodies; but ingeniously contrived hooks, alligator forceps, and lithotrites, besides the operative cystoscope and its accessories, have greatly lessened the occasions for such radical measures. In two hundred and forty-nine cases collected by Denue there were, prior to 1830, only twenty-seven extractions. Now practically all small objects, such as portions of catheters, sticks, hair-pins, stone and bone, may be removed by means of operative cystoscope and appropriate accessory instruments. Even friable wax or gum may be removed with the scoop. After phosphatic incrustation of such an object has progressed far crushing may be necessary or removal by incision through the perineum or the suprapubic area. Keyes calls attention to the danger from pieces of glass in the bladder and their liability to cut or injure the bladder incidental to efforts at extraction, and advised that immediate cystotomy be performed in such cases.

I wish to report the two following cases:

Miss C. D. entered the hospital July, 1911. Single, lived in Roanoke, white, 21 years old. Previous history unimportant.

Patient states that two years ago, on being called in the morning she arose quickly, removed her gown, and sat on the edge of the bed. She then stooped over to put on her shoes and as she did so felt something stick into the urethra. Physicians were called on account of the severe pain which followed; examinations with negative findings were reported. Patient says that the following night she dreamed that a hair-pin had stuck into her bladder. The pain experienced was felt at times for two days; following there was no discomfort for several weeks. On several occasions during the past two years has suffered with attacks of soreness and tenderness of the lower abdomen and especially marked in the right iliac region. Three months ago

patient says that she noticed the urine to have a very bad odor and a milky appearance, a heavy white sediment would form on standing. This condition, however, was not constant.

Health has been very delicate, decidedly underweight, for the past two years. Attributes her health to "nervous breakdown" incident to high-school work. Four weeks ago began to have chills and fever—three chills in all in as many days. Chills lasted five minutes. Prostration was so great that the bed was not left before entering this hospital two weeks ago.

Physical Examination: A girl of twenty-one years, small frame and rather poorly nourished and developed; looks to be no more than sixteen years of age, seems to be suffering acutely. There is decided tenderness over the lower abdomen; there is also pain most of the time, but no muscular rigidity except that produced voluntarily. Physical examination is otherwise negative.

Rectal examination shows a mass resting heavily on the rectum, this is taken to be a displaced uterus; hand upon the abdomen could not be of much service on account of the marked tenderness.

A catheterized specimen of urine was asked for. The nurse only obtained 1 ounce and reported an obstruction to the entrance of the catheter into the bladder. This specimen showed nearly one-fourth of its bulk to be pus.

Urine Examination: Amber, cloudy, neutral reaction, Sp. G. 1024. Alb. a trace; sugar 0; indican 0; Mic. Many pus cells.

Blood Examination: W. B. C. 14,000; Polys. 79 per cent.; Lymp. 15 per cent.; L. Monos. 4 per cent.; Eos. in. 1 per cent., Mast. cell 1 per cent.

It was decided to do a dilation and curettage, then make an abdominal section and suspend the uterus in some manner. On getting into the abdominal cavity a mass could be palpated in the bladder which was movable and incorporated in this mass could be felt the prongs of a hair pin. A small uterus was displaced posteriorly by the mass in the bladder and was resting upon the rectum as was made out by rectal palpation.

The bladder was well packed off and opened at the fundus and a stone formed around the center of a hair-pin removed. The stone and hair-pin weighed 685 grains. The bladder was sewed up primarily after the method of Mayo. The patient left the hospital cured in twenty-four days.

Case 2. Mr. J. C. C., single, white, twenty-two, entered the hospital on April 20th, 1914.

Eight months ago patient was leaning

against a dogwood stake which was pointed on the upper end. Patient fell and the sharp end of the stake was directed into the rectum through the anal ring. Patient felt well after the traumatic soreness had disappeared and suffered no other discomfort until two months ago, at which time a vesico-rectal fistula developed and urine leaked into the rectum. For the past two months patient has undergone treatment with bladder irrigations. At the present time the urine shows much pus. Bladder was cystoscoped, but because bladder could not be distended with water on account of the fistula, the foreign body could not be found.

An external urethrotomy was performed and a digital examination with one finger in the bladder revealed a piece of wood, which I present to you for inspection. This piece of wood was removed through the perineal incision by dilating the deep urethra and grasping it with a pair of forceps and drawing the piece of wood with its long axis out of the urethra parallel to it. This patient was discharged cured four weeks after operation.

Since reporting these two cases in June, 1914, I have had another case.

Miss G., twenty years old, was brought to the hospital August 23d with the following history which was given to me by her physician.

On Thursday night she went into the bath-room to take a douche and on account of not having the regular douche nozzle used the rectal nozzle which, according to her statement, she thought was too small and too short, so she removed the tip from the spigot of the bath tub and placed it over the hard rubber rectal nozzle which she claims she was using for a douche nozzle, and that in attempting to pass it into the vagina she inadvertently passed it into the urethra where it was lost in her bladder. She did not tell her family until Sunday when the vesicle irritation became so great that she could not stand it any longer and told her mother what had occurred. The family physician was called and made a vaginal examination which easily disclosed the presence of a foreign body in the bladder.

She was brought to the hospital Sunday night, August 23d. The following morning an X-ray plate was taken of her bladder which showed a metal bath tub tip about two inches long and a little more than an eighth of an inch in diameter. This piece of metal was easily palpated through the vagina. Her urine showed some pus and a few red blood cells and there was frequent and painful micturition. Under ether

anæsthesia examination of the urethra showed it to be red and irritated and widely dilated. The index finger, after being lubricated with vaseline, could be easily introduced into the bladder. With the index finger passed through the urethra into the bladder as a guide the piece of metal was gotten in the long axis and parallel to the urethra. A pair of curved forceps was then passed through the urethra beside the finger as a guide, one blade of the forceps passing on the inside of the metal tube the other blade grasping the outer side, and the piece of metal was removed through the urethra without difficulty. The bladder was irrigated with boric acid. She was given large quantities of distilled water and an alkali. There was no incontinence of urine and comparatively little vesicle irritation following the removal of the foreign body.

She returned to her home five days after the removal of the foreign body in good condition.

Reference: Keene's Surgery.
138 Salem Ave., S. W.

Fistula of the Anus.

Frey states that since 1896 operative treatment has been given at Krecke's clinic in seventy-two cases of fistula ani. A tuberculous origin was evident in only a very few. Recent re-examination of fifty-six of the patients showed complete incontinence in three cases and partial in ten. These cases teach that the external sphincter should never be completely divided. If this seems indispensable, he advises stopping the radical operation and letting the fistula heal from above downward. It does not affect the continence to divide merely the lower fibers of the external sphincter. He emphasized the necessity for preventing the development of a fistula when operating on an abscess. In nearly all the cases the fistula dated from an abscess near the rectum, a boil or an abscess which had opened spontaneously or been evacuated by a physician. The patients had long suffered from hemorrhoids or constipation. Frey adds that when only a small incision is made for a large abscess near the rectum, a big cavity is left and a fistula is almost certain to develop. To prevent this he advises to incise the abscess wall through into the rectum; this, he says, will prevent development of a fistula.—Munchener Medizinische Wochenschrift.

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EDWARD C. REGISTER, M. D., EDITOR
CHARLOTTE, N. C.

COMMUNICABLE DISEASES.

Communicable disease of many varieties is so constantly on hand that it behooves a busy practitioner to have some basic ideas upon which he can form thought and action directed to prevent its spread. In this respect the longevity of the various bacterial agents, under varying conditions to which they are exposed, is the all essential.

In regard to a comparatively new organism to bacteriologists, the spirocheta pallida, much has been recently ascertained. Professor Zinsser, of P. & S. College, N. Y., in the June 6th, 1914, number of the J. A. M. A., detailed the result of some experiments that he undertook and demonstrated that this infectious agent died within an hour after drying upon hard surfaces, and that even when kept moist within the protection of a drop of mucous it could not survive 24 hours.

This is very comforting and explains the comparatively small number of cases of syphilis insontium (below 10 per cent. of all the acquired). Nevertheless, it leaves us to consider what part of this 10 per cent. has been spread through contact, within the dangerous 24 hour period, with infected towels and cup rims, and, although such cannot be separated from cases acquired by kissing, the knowledge of the possibilities should be sufficient to warrant special instruction of all directly exposed, and even the general dissemination of the facts. Although little faith is usually given to a tale of innocent infection—even that professionally acquired being sometimes regarded with suspicion—the literature abounds with instances which are not to be questioned, such as the simultaneous development of labial chancres on the lips of three girls who had been kissed at a party by a young man, known to have been infected, which was recently reported. Promiscuous kissing may go on forever but the public towel and drinking cup are fast disappearing, and public health education will soon drive the dip-washing-of-glasses' farce of bartenders and soda-fountain attendants after them. Sanitary water-closet seats have not yet been introduced, but it will not be long before such, cut out in front, perhaps, and made of non-absorba-

ble material, will arise to the demand.

Of course the chief principal in the suppression of this disease is to control the carrier, but now that laboratory tests enable us to make sure of at least all suspected cases, and as we know that at least three Wassermann's (from Craig's experience with this test in the army) made at intervals of at least a week and under the well known necessary conditions of abstinence from specific treatment and alcohol, are necessary before we accept a negative result, there is no difficulty in "keeping a line on" such cases. The one great trouble is the lack of public understanding of all the possibilities connected with the malady. Therefore, since the days of false modesty in connection with disease are past, and since forewarned is doubly forearmed here, let the public know. It is the duty of every physician, don't wait to be asked.

SPECIAL ANESTHESIA SUPPLEMENT.

Recent years have been marked by some contributions to the theory and, especially to the practice of surgical anesthesia, but there has lacked what is now quite needed for the further scientific development of this alongside the other departments of surgery—a journalistic medium and editorial mouthpiece.

The American Journal of Surgery will be expanded to meet this need. Beginning with the October issue and quarterly thereafter, this journal will publish a 32 page supplement devoted exclusively to Anesthesia and Analgesia.

This supplement will be a complete journal within a journal containing editorials, contributed articles and communications, abstracts, transactions of Societies and book reviews.

The supplement has been adopted as the official organ of the American Association of Anesthetists and the Scottish Society of Anesthetists and it will also publish the transactions of other like societies.

The editor of this supplement will be Dr. F. Hoeffler McMechan of Cincinnati, one of the founders of the American Association of Anesthetists and a charter member of the New York Society of Anesthetists.

He will be assisted by a staff of well known specialists in Anesthesia, among whom we would mention:

Dr. James T. Gwathmey, New York; Dr. Willis D. Gatch, Indianapolis, Ind.; Dr. William Harper De Ford, Des Moines, Ia.; Charles K. Teter, Cleveland, O.; Dr. E. I. McKesson, Toledo, O.; Dr. Isabella C. Herb, Chicago, Ills, and Yandel Henderson of Yale University.

MENTAL UNSOUNDNESS.

There is a difference between unsoundness of mind and insanity. Insanity may be maniacal; but unsoundness may be softening and dementia, but such victims are harmless, and inoffensive.

Unsoundness and actual mental disease, i. e., of an acute nature, is characterized by violent symptoms; but unsoundness purely implies gradual decay of normal faculties of the mind such as defective ideation, perverted feelings, and more or less incapacity to comprehend, or transact business. Unsoundness involves impairment of memory, reasoning faculties, will power, and failure to understand the relations between man and man. Unsoundness is not characterized by violent outbreaks, and sudden insane impulses. There are acute and raving maniacs; but in simple unsoundness, there is depression of spirits, and melancholy; and in such states tend to suicide. Maniacs are dangerous because they are liable to a homicidal impulse. In dementia from softening, there is no disposition to harm any one. They are childish, and kindly disposed. Whatever delusions or hallucinations possess them, they are not of violent character. They may have grandiose conceits, and are happy in delusions of being possessed of wealth, when there is but little of this world's goods in their possession.

F.

OIL OF GAULTHORIA.

The oil, chemically, consists 90 parts of salicylate of menthyl, and 10 parts of terebene. Taken, undiluted, it produces considerable heat in the fauces, oesophagus, and stomach, followed by some nausea. It is splendidly absorbed, and is excreted principally by the kidneys to the secretion of which it imparts its characteristic odor. It is partly eliminated by the lungs, and skin. To the stomach, it acts as a stimulant, and in large doses, causes nausea and vomiting. It is a powerful antiseptic, and 1 part to 200, to urine, has been known to preserve it for 18 days. Urine voided an hour after taking 20 drops, remained perfectly free from putrefaction for 12 days, while the urine voided before the salicylate of menthol was taken, became putrid and ammoniacal in a few days.

On account of this property, it is serviceable in cystitis—especially of the chronic form, and acts well in chronic bronchitis; in acute and chronic rheumatism, and as a diuretic in cardiac, renal, and hepatic dropsies.

It combines well with digitalis, and other diuretics. However, it should not be re-

lied on as a diuretic, to the exclusion of other drugs.

LITHEMIA.

Lithemia is a condition arising from an incomplete chemical and physiological process, in connection with the metamorphosis of albuminoid substances. The uric acid is supposed to be an intermediate product in the formation of urea for excretion. Derangements of the digestive organs, or of the nervous system; or any cause which may produce such derangements, may indirectly lead to the disturbance of the hepatic function, and a consequent production of lithemia.

Such a condition gives rise to gout, diabetes, rheumatism, arthritis, and Bright's disease all depending on the amount of lithic acid produced, accumulated, and not neutralized, or eliminated. The prevention is by such a diet as will cause lithemia. The diet should be plain and simple, eating sparingly of sweets, starches, and fats; avoiding liquors, as well as tea and coffee, but using plenty of milk.

POST-GRADUATE MEDICAL STUDY.

That post-graduate study on the part of Southern medical men is constantly increasing is manifest to all observers, and that its benefits are of great value both to the physician and patient equally admits of no successful contradiction. Southern medical men go everywhere almost in the United States, and perhaps never before did so large a percentage attend foreign clinics than do at the present time. A recent cursory inspection of the annual catalogue of the oldest post-graduate school in America evinced the following attendance during the past year of medical graduates from Southern States: Alabama, 12; Arkansas, 10; Florida, 11; Georgia, 20; Kentucky, 11; Louisiana, 6; Maryland, 5; Mississippi, 8; Missouri, 9; North Carolina, 25; Oklahoma, 6; South Carolina, 14; Tennessee, 6; Texas, 33; Virginia, 7.

Editorial News Items.

The Baptist denomination of the state of South Carolina have acquired the valuable Hotel Colonia property in Columbia, S. C. and expect shortly to open it as the Baptist State Hospital. The property is estimated to be worth \$100,000.00 and arranged for hospital use will contain 200 beds beside ward space. The building, constructed only a few years since at the cost of \$120,

000,00, is built of brick, Spanish architecture, four stories high, and with the ample grounds, constitutes an admirable property for the building up of a splendid institution by this great denomination in South Carolina. No announcement of staff have as yet been publicly made.

Dr. G. D. Gardner of Asheville, N. C. who sustained an accidental pistol shot wound in the abdomen at the hands of his stenographer who was carelessly handling the revolver, August 2, is reported convalescent and able to resume his professional duties.

More than twenty of the prominent members of the medical profession of the Carolinas attended the recent session of the American Clinical Congress held in London, Eng. last month, several of whom remained to tour the continent and see medical and surgical Europe.

From an advance Report on the prevalence of Pellagra in North Carolina recently issued by the State Board of Health of that state, pellagra was responsible for 178 deaths in North Carolina in the past year. Charlotte leading with 34, Raleigh following next with 24, Goldsboro 14, Durham 12, New Berne 9, Wilmington 8, Greensboro 8, and Asheville 1. The Board suggest the possibility of the household insects, notably the bedbug (*limex lactularius*), acting as carriers, or intermediary hosts of pellagrous infection.

Conforming to a suggestion made by the municipal authorities originating from neighbors objecting to the noises necessarily associated with the institution, Dr. A. M. Ballard of Asheville, N. C. has removed the Hospital for Cannines which he has successfully conducted in that city for several years past to a site in the country where his work will be continued with enlarged facilities. Dr. Ballard's work on this line has commended itself to lovers of man's most appreciative friend of the lower animal, and the helpful and kindly attentions he has given hundreds of dogs in the past 20 years will ever mark him a most humane man.

Dr. Harry P. Barrett, of Charlotte has been re-elected City Bacteriologist of Charlotte, N.C. at a salary of \$800,00 per annum. He makes water and other analyses for the municipal health department, giving only a minor portion of time to the work. Dr. Barrett is from Louisville, Ky. and is the bacteriologist for the Charlotte Sanatorium.

The daily press report the subject of the removal of the U. S. Marine Hospital from Wilmington, N. C. on account of the diminished patronage to the same by the shipping interests of the port. A communication has been laid before the commercial bodies of the city, and recent reports indicate an increased patronage of the institution. Much interest has been manifested in the public health work done in the community by the official staff of the Marine hospital, and the retention of the hospital and its staff are earnestly desired.

The recent session of the Georgia legislature passed an act providing for the collection of vital statistics in that state under the direction of the state board of health. It also provides (if two successive grand juries so elect) that one or more counties may form "sanitary districts" and elect a sanitary inspector at a salary of not less than \$1200,00 per annum who shall supervise the schools within the confines of the district. It is expected to begin the collection of vital statistics in Georgia Jan. 1, 1915.

Dr. G. Frank Lydston, of Chicago had conferred upon him the degree of Doctor of Civil Law, at the annual convocation on June, 3, 1914, of the Hamilton College of Law of Chicago.

Dr. J. Vance McGougan of Fayetteville, N. C., one of Carolina's princely gentlemen as well as scholarly physicians and successful planters, in accordance with his annual custom entertained the Cumberland and Hoke County (N.C.) Medical Societies on Aug. 20 at his splendid country place "Skiboo".

Dr. L. N. Glenn of Gastonia, N. C., who has spent his summer vacation in visiting British medical centres has returned and resumed practice.

Dr. J. F. Highsmith, Fayetteville, N. C., President of the N. Carolina State Board of Medical Examiners, who has been summing in the Medical centres of the British isles has returned home and resumed practice.

The construction work on St. Luke's Hospital, New Bern, N. C., the private institution of Drs. R. Duval Jones and J. F. Patterson, is progressing rapidly and it is contemplated to open the hospital the end of the year.

The Field Hospital Corps of N. Carolina National Guard was encamped the end week of August at Camp Battle (named in compliment to the Surgeon Gen'l N. C. National Guard, Dr. S. Westray Battle of Asheville, N. C.) near Hendersonville, N. C. More than 100 members of the Hospital Corps were present under the command of Captains (Drs.) J. W. Tankersley and J. M. Lynch, and Lieuts. (Drs.) F. Marion Davis and Herbert Mease.

The N. C. State Board of health is furnishing anti-typhoid vaccine and in many of the counties large numbers are being vaccinated. Dr. B. W. Page the Roberson County Health Officer reports to Aug. 25 more than 2800 vaccinations in his county.

BOOK NOTICES.

Anoci-Association. By George W. Crile, M. D., Professor of Surgery, School of Medicine, Western Reserve University, Cleveland; and William E. Lower, M. D., Associate Professor of Genito-Urinary Surgery, School of Medicine, Western Reserve University, Cleveland. Octavo of 259 pages, with original illustrations. Philadelphia and London. W. B. Saunders Company, 1914. Cloth, \$3.00 net.

This volume contains in Part I a statement of the Kinetic Theory of Shock and the principle of Anoci-Association and a summary of a long series of experiments in part published in the following monographs: Surgical Shock, Surgery of the Respiratory System, Problems Relating to Surgical operations, the Blood-Pressure in Surgery, and Hemorrhage and Transfusion; and in part to be published later in other monographs. In Part II the application of the Kinetic Theory to the technique of surgical operations is described. The authors have given a most practical presentation of the technique of Anoci-Association but we all realize that each operator who accepts the fundamental principles will work out their practical applications according to his own personal equation and to the surgical environment in which he works.

Diseases of Bones and Joints. By Leonard W. Ely, M. D., Associate Professor of Surgery, Leland Stanford Junior University, San Francisco, Cal. Surgery Publishing Company, 92 William Street, New York, U. S. A., 1914.

This volume is published at a very appropriate time as there is an unusual

amount of interest manifested now by the profession in Acute and Chronic Arthritis as well as other forms of Bone and Joint Diseases.

Dr. Ely has made a specialty of this one branch of surgery for years and is very well equipped indeed for presenting a book upon this subject. The general practitioner will find this volume especially valuable and can read it with the assurance that it presents instructions from an authoritative source upon a subject where much light is needed. Dr. Ely lays down broad general principles with the evidence upon which they are based and then shows how these principles may be applied.

In a brief terse way, he presents the Anatomy, Physiology and Pathology of Bones and Joints, Acute and Chronic Arthritis of various types, Ankylosis, Diseases of the Shafts, Acute Osteomyelitis, Chronic Inflammations in the Bone Shafts, New Growths in Bone, etc.

The volume contains 220 pages of text and 94 illustrations. Price \$2.00.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume III. Number III. Octavo of 215 pages, 54 illustrations. Philadelphia and London. W. B. Saunders Company, 1914. Published Bi-Monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

This volume is one of the most interesting that comes to the hands of the reviewer and it is always a pleasure to read these very instructive talks.

The table of contents for this number is as follows: Murphy's Clinical Talks on Surgical and General Diagnosis; Tenoplasty, Tendon Transplantation, Tendon Substitution, Neuroplasty; Tenoplasty on Wrist, Adhesions of All Tendons En Masse, Freeing and Wrapping of the Superficial Group in a Fat and Fascia Flap; Traumatic Division of Flexor Tendons and Median Nerve, Tenoplasty and Neuroplasty; Bony Ankylosis Between Ulna and Humerus Following Fracture of Olecranon, Arthroplasty; Nailing of Fracture of Surgical Neck of Humerus After an Unsuccessful Attempt to Secure Union by Bone Transplantation; Fracture-Dislocation of Head of Humerus; Compound Fracture of Lower Third of Femur; Lower End of Upper Fragment Penetrating Knee-Joint and Resting Under Patella, Open Apposition with Lane Plate; Carcinoma of Male Breast; Carcinoma of Right Hip, Metastatic From the Breast; Osteoma of the Head of the Fibula, Removal of Tumor and Bone, Transplantation; Penetrating Ulcer on the Lesser Curvature of the Stom-

ach, Recurrent Hematemesis; Sarcoma of the Ovary with Rotation of the Pedicle, Differential Diagnosis, Operation; Ankylosis of the Jaw.

Treatment of Chronic Leg Ulcers. A Practical Guide to its Symptomatology, Diagnosis and Treatment by Edward Adams, M. D., Instructor of Surgery, New York Post-Graduate Medical School and Hospital, Attending Surgeon to the German Hospital, O. P. D., Fellow of New York Academy of Medicine, Fellow of American Medical Association, Etc. Published by the International Journal Surgery Co., New York, 1914.

In this little volume we have a very careful presentation of chronic leg ulcers. This subject is not dealt with in detail in textbooks on surgery and it would be well enough for all physicians to have this book at their disposal as the subject is one that we have to deal with so frequently. To avoid frequent and useless repetitions the various therapeutic measures are described in detail in a special section of the book while the treatment of the different types of ulcer is presented in a very practical and thorough manner. The newer methods have received consideration and a brief description of the surgical treatment of enlarged veins has also been added.

The book contains 127 pages of text with a good index.

Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic) for 1913. Octavo of 819 pages, 325 illustrations. Philadelphia and London. W. B. Saunders Company, 1914. Cloth, \$5.50 net.

The contents of this volume are divided into the following subjects: Alimentary Canal, Urinogenital Organs, Ductless Glands, Head, Trunk and Extremities, Technic, General Papers.

It is hard to call attention to any particular paper in this edition because all of them are excellent and so are the very numerous illustrations. The book itself is beautifully and durably bound and this of course adds considerably to an already valuable volume.

Guiding Principles in Surgical Practice. By Frederick-Emil Neef, B. S., M. L., M. D., New York City. Surgery Publishing Company, 92 William Street, New York, 1914. Price \$1.50.

The author answers herein some of the questions which present themselves to the general practitioner and surgeon, particularly in the beginning of his career, during the period in which he formulates for him-

self the rules that are likely to direct him in his future work.

The viewpoint is based on clinical studies in the operating room and at the bedside of the patient. The book covers the practical points in the preparation of the patient for an operation, the arrangement of the operating room, the important relations between the surgeon and his anesthetist, assistant, the family physician, the nurse during the course of the operation, also the after care of the case.

Other chapters in the book cover such important considerations as Sterile Washes and Wound Dressings. Sterilization of Utensils and instruments for the operation. The Surgeon's Hands. Wound Healing and Scar Formation, Asepsis, Suture Material, Anaesthesia, Incision, the Course of the Operation, Care of the Patient after Operation, the Treatment of Unclean Wounds, in fact, within this book of 180 pages will be found those very necessary essentials that guide in the successful handling of operative work.

A Treatise on Clinical Medicine. By William Hanna Thompson, M. D., LL.D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine, etc. Octavo volume of 667 pages. Philadelphia and London. W. B. Saunders Company, 1914. Cloth, \$5.00. Half Morocco, \$6.50.

This book begins with the meaning of certain common but always important symptoms and in each instance the meaning is quite plain so that it can be thoroughly understood before going any further. Then follows a chapter on the use of remedies and how they can be most conveniently classified according to their special applications. Next a section on the greatest cause of disease and death, namely, infections by living micro-organisms. The author has given a splendid classification of these agents. The last section deals with diseases of particular organs and tissues.

Collected Papers From the Research Laboratory of Parke, Davis & Co., Detroit, Mich. Reprints—Volume 2, 1914.

This volume represents the compiled articles from the Research Laboratory which were published in various scientific journals in 1913. There are 22 articles in this the second volume and all of them are quite interesting and instructive.

Arnold Bennett will describe the cafes, restaurants, aristocracy and art of Copen-

hagen in his fourth paper "From the Log of the Velsa" to appear in the September Century. New York has nothing like the Tivoli, in Mr. Bennett's opinion. It is what London's "Earl's Court" ought to be and is not. It is a garden in the midst of the city and comprises "restaurants, cafes, theater, concert-hall, outdoor theater, bands, pantomime, vaudeville, dancing-halls, and very numerous sideshows both on land and water." And the sculpture at the Glyptothak Museum, he swears, could make one forget even the income tax and the Monroe Doctrine.

Alice Hegan Rice has written for the August Century (the Midsummer Fiction Number) a delicious story of darky superstition and life under the title of "Hoodooed." Mrs. Rice is abroad for the summer.

The August Woman's Home Companion.

In the August Woman's Home Companion appear photographs of 17 babies who, out of 100,000 examined at the Better Babies contests, were the only ones marked 100 by the physicians in charge. All of these children were examined and graded according to the Woman's home Companion standard score-card adopted for use in all Better Babies contests.

Other interesting special contributions to the August number are: "Good Times That Cost Next to Nothing," being accounts of happy vacations spent by resourceful persons who are willing to pass their ideas on to others; "Queen Mary of England," an intimate personal account of Great Britain's sovereign family; "The Lived-in Garden," a practical, suggestive article about gardens contributed by Frank A. Waugh, professor of landscape gardening at the Massachusetts College of Agriculture; "Homemade Fireless Cookers," contributed by readers; "Every Girl Should Know the Right Way to Stand, Sleep and Walk" by William J. Cromie; "Such a Pretty Girl!" by Katharine Ferguson; and "A Brittany Summer Fair and Festival."

Fiction and special art features are contributed by Juliet Wilbor Tompkins, Fannie Heaslip Lea, Margaret Busbee Shipp, Margarita Spalding Gerry, Mary Heaton Vorse, Henry Hutt, Charles C. Curran, and Maud Tousey Fangel.

The regular Fashion, Cooking, House-keeping and Young People's departments are filled with splendid suggestions peculiarly valuable in summer.

Good Things Boys Can Cook in Camp.

The following camp receipts are taken

from "The Housekeeping Adventures of the Junior Blairs" in the August St. Nicholas:

CAMP COFFEE.

One pint of cold water and three heaping tablespoonfuls of ground coffee. As soon as the water bubbles, and before it really boils, take the kettle off and let it stand for ten minutes where it is hot. Pour a tablespoonful of cold water down the spout to settle it.

HAM AND EGGS.

Cut off the rind; when the pan is hot put the meat in; turn often; season with pepper. Take up, put on a hot dish and cover. Break the eggs into the hot fat, and when they are set turn each one carefully over and brown it.

BROILED FISH.

Scale or skin, clean, and wipe dry. Spread open the broiler and rub the wires with bacon rind or pork; cut the head off and split the fish open down the back and lay it in; hold the broiler over the coals and turn it often; sprinkle with salt and pepper.

BAKED POTATOES.

Wash potatoes of even size; put them in the oven under the fire, cover with ashes, and put coals on top; new potatoes will cook in half an hour, old ones in forty minutes.

CORN CAKES.

$\frac{1}{2}$ pint of corn meal.

$\frac{1}{4}$ pint of flour.

1 rounded teaspoonful of baking powder.

1 rounded teaspoonful of sugar.

$\frac{1}{2}$ teaspoonful of salt.

Mix all together, and then gently add cold water and stir till you have a thick batter. Have ready a hot frying pan, well greased and put the batter in in spoonfuls; they will run together as they bake, but you can cut them apart; turn them over and brown on the under side.

PANNED FISH.

Clean the fish; cut off the heads and break the spines, to keep them from curling as they cook. Put three slices of bacon or pork into a frying pan, and, when this is done, take it out and put in the fish; cook quickly and turn often.

Other modern poets represented in this number of The Century will be Grace Hazard Conkling, Louis Utermeyer, author of "Challenge," Arthur Davison Ficke, au-

thor of "Mr. Faust," and Margaret Cobb, a mountain woman of California with no schooling, bound to a life of peculiar hardship, whose poetical gift was first discovered by Jack London, who lent her some books of verse.

A Minister's Experiences With Women.

In the September Woman's Home Companion a minister begins a series of articles in which he is going to relate his experiences with women. The first story in his series is the story of "The Woman Who Came in the Night"—a woman in deep trouble who came for counsel and advice. In a general way the minister comments as follows on his experiences with women:

"I suppose I have known twenty-five thousand women in my nearly thirty years of ministry. There have been all kinds of women, as there have been all kinds of men; but as I look back over the years, the women show up rather more favorably than the men.

"So long as the world is as it is, he who enters upon the work of the ministry must expect that more than a half of his time and effort will be claimed by women; at least in the parishes where ordinary conditions prevail. In that respect the minister is not different from the musician, or the actor, the lecturer, or the popular author. The proportion of women in church congregations is not so overwhelming by any means as the proportion of women at concerts, or the theater, nor among the readers of new books. Women have leisure for these finer things of life, as their harried and driven husbands do not; and in their church attendance there is another influence more potent even than their leisure. Spiritual insight of the truer sort is the peculiar birthright of good women: they are the preservers of reverence, the transmitters of vision to the muscled men who are their sons."

Reprints Received.

Chronic Intestinal Stasis—A. Types of Cases. B. Preventive and Medical Treatment Outlined, by William Seaman Bainbridge, A. M., Sc. D., M. D., New York City. Reprinted from The Woman's Medical Journal.

The De Keating-Hart Method of Fulguration, by William Seaman Bainbridge, Sc. D., M. D., New York. Reprinted from The Medical Record. William Wood & Company, New York.

Intestinal Stasis in Relation to Cancer

Etiology and Prophylaxis, by William Seaman Bainbridge, Sc. D., M. D., New York. Reprinted from the Journal of the Medical Society of New Jersey.

A Brief Resume of the World's Recent Cancer Research, by William Seaman Bainbridge, M. D., New York. Reprint from the Medical Record. William Wood & Company, New York.

Technic of the Intra-Abdominal Administration of Oxygen, by William Seaman Bainbridge, Sc. D., M. D., New York. Reprinted from the American Journal of Surgery.

Arterial Ligation for Irremovable Cancer of Pelvic Organs—Technic Adapted and Amplified, by William Seaman Bainbridge, A. M., Sc. D., M. D., New York City; Surgeon, New York Skin and Cancer Hospital; Associate Surgeon, Woman's Hospital; Professor of Surgery, New York Polyclinic Medical School and Hospital. Reprinted from The Woman's Medical Journal.

Fulguration and Thermo-Radiotherapy, by William Seaman Bainbridge, M. D., and Diathermy (Nagelschmidt) and Electrocoagulation (Doyen), by Worthington Seaton Russel, M. D. Reprinted from the Journal of Advanced Therapeutics.

Oxygen in Medicine and Surgery—A Contribution, With Report of Cases, by William Seaman Bainbridge, A. M., Sc. D., M. D., New York City. Reprinted from the New York State Journal of Medicine.

The Use of Certain Physical Agents in the Treatment of Cancer and Allied Diseases: (1) Electrocoagulation (Doyen); (2) Fulguration (De Keating-Hart); (3) Thermoradiotherapy (De Keating-Hart), by William Seaman Bainbridge, A. M., Sc. D., M. D., Professor of Surgery, New York Polyclinic Medical School and Hospital; Surgeon New York Skin and Cancer Hospital; Secretary, Department of Research, New York Skin and Cancer Hospital; Honorary President First International Congress for the Study of Tumors and Cancer, Heidelberg, 1906; Attending Surgeon New York City Children's Hospitals and Schools; Consulting Surgeon, Manhattan State Hospital, Ward's Island, N. Y.; Consulting Surgeon, Tarrytown Hospital; Consulting Gynecologist, St. Andrew's Hospital, Ossining Hospital, and St. Mary's Hospital, Jamaica, N. Y.; Member Medical Reserve Corps, United States Navy; Consulting Surgeon, New York College of Dental and Oral Surgery, New York City. Reprinted from International Clinics, Vol. III, Twenty-third Series.

Lithopedion, by William Seaman Bainbridge, Sc. D., M. D., New York. Reprint-

ed from *The American Journal of Obstetrics and Diseases of Women and Children*, Vol. LXV, No. 1. William Wood & Company, Publishers, New York.

Malignant and Non-Malignant Growths, by William Seaman Bainbridge, A. M., M. D., New York City. Reprinted from *The American Journal of Surgery*.

The Intra-Abdominal Administration of Oxygen. A further contribution, with reports of additional cases, by William Seaman Bainbridge, M. D., New York City. Reprinted from *Annals of Surgery*.

Possible Errors in the Diagnosis of Abdominal Cancer—A Plea for Exploratory Laparotomy—Illustrative Cases, by William Seaman Bainbridge, M. D., New York City. Reprinted from *New York State Journal of Medicine*.

The Campaign Against Cancer: Educational, Experimental and Clinical, by William Seaman Bainbridge, A. M., Sc. D., M. D., Surgeon, New York Skin and Cancer Hospital; Professor of Surgery, New York Polyclinic Medical School and Hospital, New York City. Reprinted from *American Journal of Dermatology*, Vol. XV, No. 7. The Philmar Press, St. Louis.

The Evolution of the Operating Table, by William Seaman Bainbridge, M. D., New York. Reprinted from *The New York Medical Journal and The Medical News*.

Chronic Intestinal Stasis Surgically Considered, by William Seaman Bainbridge, A. M., Sc. D., M. D., New York. Reprinted from *The New York Medical Journal*, incorporating *The Philadelphia Medical Journal and The Medical News*.

The Surgical Treatment of Cancer, by William Seaman Bainbridge, A. M., Sc. D., M. D., New York. Reprinted from *The International Journal of Surgery*.

Some Phases of the Surgical Treatment of Cancer—A Clinical Lecture, by William Seaman Bainbridge, M. D., New York. Reprinted from *The American Journal of Surgery*.

Metastases Following Incision of a Sarcoma, by William Seaman Bainbridge, Sc. D., M. D. Reprinted from *The New York Polyclinic Journal*.

Abstracts of the Leading articles of the month.

The Visceral Lesions of Purpura and Allied Conditions.—By Osler (*Brit. Med. Jour.*) says that the skin lesions in these conditions, four anatomic types occur: (1) Purpura, either simple or associated with swelling, purpura urticans. Bullae may be

present. (2) Effusion, either ordinary urticaria or antio-neurotic edema. (3) Erythema—various types, with or without swelling. (4) Necrotic areas. These are sequels to localized intense infiltrations of blood and serum.

Visceral lesions are of two types, first, mechanical, due to localized exudation of serum, or to effusion of blood; second, inflammatory, as nephritis, pericarditis, etc. As to etiology some cases are infectious, for example, many of those associated with arthritis; others are metabolic in origin. Many of the skin lesions resemble anaphylactic phenomena and may be of that origin.

He describes the visceral manifestations in considerable detail, citing many case histories, under the following headings:

I. **Cerebral Manifestations**.—These include: 1. Transient pareses, probably vasomotor in origin; 2. Gross hemorrhages. These are not common; symptoms depend, of course, upon the location and extent of the hemorrhage.

II. **Ocular Lesions**.—These are not uncommon. They may consist, first, of hemorrhages into the conjunctiva, into the retina or into the eye-ball itself. Detachment of the retina may occur. Secondly, inflammatory lesions occur, as iritis, capsulitis and general ophthalmitis.

III. **Gastro-Intestinal Symptoms**.—These consist of (a) colic, (b) vomiting, with or without colic, frequently bloody, (c) diarrhoea, with more or less blood. Cases of colic are not rarely mistaken for appendicitis. However, rigidity is not present, and pain is never localized. There is little tenderness. These symptoms occur under the following conditions:

1. Many of the attacks may be without skin lesions, to be followed unexpectedly on some occasion by an outbreak of typical skin lesions of one type or another.

2. In association with hemophilia. Here the symptoms are due to spontaneous visceral hemorrhages.

3. With hatactics of ordinary urticaria.

4. In cases of angio neurotic edema, particularly in severe cases.

5. In connection with simple purpura. These are the causes known as "Henoch's Purpura."

Purpura. If the skin lesions be overlooked, or occur late, a wrong diagnosis of appendicitis or other intra-abdominal condition may be made.

IV. **Renal Complications**.—These are the most serious in all groups. They occur particularly in the exudative erythema group. Osler describes three types:

1. Cases which run an acute course with dropsy and uremia, ending in death.

2. Cases in which the albumin disappears and the patient recovers completely.

3. The nephritic becomes chronic. Here there is danger of a progressive nephritis, with cardio-vascular changes.

V. Cardiac Complications.—These are fortunately rare. They occur in the rheumatic or septic cases.

VI. Respiratory Complications.—Asthma, emphysema and pneumonia may occur. The most dangerous complication is edema of the glottis, associated with angio-neurotic edema.

Pyorrhea and the General Health.—Glen (Glasgow Medical Journal) does not mention the constant flow of pus into the stomach during sleep, but he does emphasize how bacteria are squeezed out of the socket by loosened teeth during mastication, become mixed with masses of food too large to be properly digested by the gastric juice, and so reach the intestines before being destroyed. They may be present in too great numbers to be all destroyed or they may be washed down by fluid and passing through the stomach unaffected, reach the intestine still alive. To a normal mucosa they would do no harm, but in one damaged by distention or inflammation they find a suitable habitat in which to multiply; the ideal condition is found in subjects of chronic constipation. Before long a dilated cecum is produced, which is in due time followed by a distended duodenum; such changes do not take place in a few weeks or months, but are gradual, extending over years, and are primarily the results of carelessness with regard to the bowels. So long as that sewage purifier, the liver, is able to render innocuous the poison brought to it by the portal circulation, constipated individuals go on comfortably; but occasionally they have a "splitting" headache due to failure of the liver cells to transform a more concentrated combination of poisons, and after such failure occurs once, it is apt to recur again and again until a vicious circle is established, and the patients become the subjects of "bilious" vomiting and malaise, and subsequently of aches and pains in various tissues of the body. Blood in such impure state is less effective in protecting the body against other microbes, such as the tubercle bacillus, and persons who formerly had no trouble with scratches and abrasions, now find that these nearly always suppurate.

His treatment consist in keeping the intestinal contents moving more rapidly. Patients appreciate the benefit of aperients. Most of the dyspepsia are caused by this intestinal stasis, and so it comes about that

many people pin their faith to some quack remedy, all of which remedies have as their most important ingredient some laxative medicine.

Neurasthenia in Syphilis.—Krebs (Deutsch. Med. Wochensh) has an article in this connection which will appeal very strongly to those acquainted with the nervous effect of syphilis. She writes comes to the following conclusions: (1) There is a syphilitic neurasthenia occurring both in the acute and in the chronic or late stages of the syphilitic disease; (2) in all neurasthenics with admitted earlier syphilitic infection, or in those reasonably suspected, the Wassermann reaction of the blood should be ascertained, and if this be negative the cerebro-spinal fluid should be investigated in the same way; (3) if one gets a positive result the combined antisymphilitic cure should be instituted, together with general nervous and bodily treatment; it is advisable even when the patient has in the early stages had two or three years' treatment, and later has had it off and on, to again introduce the treatment should any neurasthenic symptoms occur.

Stomachaches Associated with General Infections in Childhood.—Gray in The London Practitioner, is convinced that many of the intestinal and dyspeptic troubles of later life owe their origin, in part at least, to intestinal disorders in childhood. These not only originate from the artificial conditions under which we live with regard to unsuitable food, etc., but may arise in some instances from repeated acute, or persistent and untreated chronic, general infections. It is our duty to control or to remove the exciting causes of these lesions, before they have advanced to such a degree as to cause permanent gross changes in the intestine or its mesentery. As the commonest sources of general infections in childhood are the mouth, teeth, fauces, and naso-pharynx, together with secondary infections of the ears, cervical glands, etc. Particular attention should be paid to these as well as to the routine control of the diet, to the presence of worms, etc., as points in the treatment of chronic abdominal pain. Thus we shall be called upon less often to treat, both in children and adults, some of the grave intestinal disorders, of which chronic "stomachaches" are not infrequently the neglected warning.

Tonsillectomy in Children.—Riedel (Munchner Medizinische Wochenschrift) declares that he had rather remove the gall-bladder, the appendix or an ovarian tumor, than operate on a small, firmly em-

bedded and friable tonsil. Tonsillectomy under such circumstances is a serious operation and requires general anesthesia. With ordinary, enlarged tonsils local anesthesia may suffice even for children, but he has never attempted it as he dreads the child's crying. The general anesthesia has to be performed for a short interval which, of course, is not without its dangers. The blood swallowed during the operation may be vomited afterward and give cause for alarm, as it is supposed to be the dreaded "hemorrhage." The writer has known of the pillars being sutured together on this account when there was really no tendency to hemorrhage. The doctor has attempted tonsillectomy a few times in acute tonsillitis but found the tonsils too soft and friable to be moved. He says in conclusion that an imperfect operation is worse than none. A diseased tonsil must be removed in toto, down to a small bit of sound tissue which he always tries to save. He prefers a stout, unbendable, heavy and straight clamp, 22 cm. long and 5 and 13 mm. broad, with three teeth. This leaves his right hand free for the knife.

Technic for Tonsillectomy.—Trautmann (Munchner Medizinische Wochenschrift) insists that the tonsil capsule should be removed with it, that is, the sheet of connective-tissue that encloses the tonsil on the outside. The portion of the tonsil toward the mouth extends beyond the capsule, which only covers the side. The front of the tonsil is covered with what he calls the prepuce; it shows up when the root of the tongue is depressed with a spatula. The anterior pillar of the soft palate from the tongue like a flag-staff and the prepuce spreads from it above like a flag on its standard. The doctor gives several illustrations to show conditions and the advantages of obtaining access to the tonsil by a curving incision through this prepuce; this exposes the tonsil and also its capsule and permits the whole to be easily shelled out with the finger or a blunt instrument. He warns expressly against using a cutting instrument. The tonsil is taken out through the incision, not directly into the mouth; by this means all danger is avoided of injuring the veins. The vessels severed in the operation retract at once and as they slip back into the stout muscles forming the tonsil recess they become compressed so that there is no danger of hemorrhage. It there should be hemorrhage the comparatively easy matter to arrest the bleeding.

A Year's Progress in Rhinology, Laryngology, and Otology.—Yorke (Liv-

erpool Medico-Chirurgical Journal) calls attention to the late theory concerning ozena, to the effect that it is occasioned by a morbid condition of the fifth nerve, which produces concurrently atrophic changes in the bones and soft parts of the face, especially noticeable when the disease is unilateral. He observes that in spite of innumerable theories and every conceivable remedy, from vaccines to the inhalation of ozone, ozena continues obscure in nature and obstinate to treatment. Concerning sinuses the general trend is toward a more conservative position. Even Killian is less satisfied than formerly with his operation on the frontal sinus. The slow and deliberate exenteration of the ethmoid, under the control of the eye, is becoming the routine practice, especially on the Continent; while in regard to the maxillary antrum there is a growing tendency to try a purely intranasal operation before resorting to that of Caldwell-Luc.

The most important contribution of the year to our knowledge of sinus disease was made at the International Congress by Professor Moure of Bordeaux. Moure affirmed that when all the mucous membrane of a sinus is curetted away by the cavity becomes obliterated, partly by thickening of its osseous walls and partly by fibrous-tissue formation. The author maintains that this fact is confirmed alike by clinical observations on man and experimental research on animals.

The submucous operation now enjoys a high reputation. The technique is well-nigh perfect, except for the unfortunate necessity of packing the nose at the end of the operation. It appears, however, from the ingenuity of recent suggestions, as if even this defect might soon be obviated. It is impossible to pass away from this operation without mentioning some of its modern applications. Of these two are of minor interest, viz., the unplantation of hard paraffin beneath the mucous membrane of the septum in ozena, and the use of the transplanted septal cartilage to reduce the deformity of "saddle-nose."

A third application of the submucous operation is concerned with the surgery of the pituitary body. The proneness of the pituitary to morbid conditions is not yet generally recognized, and Cushing's recent assertion that it is as commonly diseased as the thyroid must have caused surprise.

This structure has received great attention during the year, and has been the subject of important discussion at the Royal Society of Medicine and the International Congress. It is now definitely established that the anterior lobe of the gland is related to the general growth of the body, and

especially the skeleton; and it is thought very probable that its functions are exerted by some chemical agent or hormone, though such has not yet been found. In the case of the posterior lobe a definite hormone has been obtained, which induces contractility and increased tone of involuntary and cardiac muscle, as well as exciting the activity of certain glands, viz., the kidney and the mammary gland.

Hirsch classifies tumors of the pituitary into intrasellar and intracranial. The former expand the sella-turcica, but do not extend beyond it. The latter enlarge upward toward the brain and cause ocular disturbances. The intracranial are the more numerous, and, unless cystic, are inoperable. The intrasellar variety, on the other hand, be they solid or cystic, are amenable to surgery.

Of the score of operations which have been suggested, the three most likely to survive all gain access to the gland through the body of the sphenoid. In the Killian-Hirsch and Rouge-Halstead operations, adopted by Hirsch and Cushing respectively, the anterior surface of the sphenoid is first exposed by submucous resection; while in the transpalatine operation, which gives more room, the anteroinferior surface of the sphenoid is approached through the mouth.

It is interesting to note that Hirsch and Cushing (in nearly equal number of operations) have each had a mortality of about 13 per cent. Hirsch states that only four of his cases were uninfluenced by operation; in four the symptoms were relieved for some months, and in 21 very considerable improvement occurred.

Allypin is regarded as a very valuable anesthetic and one particularly serviceable for posterior turbinectomy, since it renders the mucous membrane insensitive, without, however, causing the shrinking produced by cocaine.

As to the tonsils, the general consensus of opinion is to the effect that they exercise a useful function at puberty and must be respected even though enlarged, unless mechanically troublesome. Chronic inflammations of the pharynx, and indeed those also of the nose and larynx, are being treated successfully in Killian's clinic with the external application of hot air (100 deg. C. and over).

The operative treatment of papilloma of the larynx is becoming each year more satisfactory, as attested by Gluck's figures, in whose hands the last 63 laryngectomies have been without mortality. Moreover, 30 per cent. of his patients have remained free from recurrence for three years or over. A novel application of bronchoscopy

is by direct applications of cocaine and adrenalin to the mucous membrane of the bronchi in asthma. Ephraim has adopted the treatment in 88 cases, with favorable results in 72.

The value of the labyrinth operation, in non-infective conditions of the ear, for the relief of tinnitus and vertigo the future must decide. In this relation Hugh Jones, in a number of carefully selected cases, has recently cured very severe vertigo by opening the labyrinth, whilst Fry seems to have proven that the malleoincudal joint must be regarded as a fixed one.

The Medical Treatment of Cholelithiasis.—Anderson (Canadian Medical Association Journal) says that he believes the following statements are fairly warranted by our present knowledge:

1. That while surgical procedure is frequently the best, and often the only means offering a chance of relief, its advocacy, based on certainty of cure and assurance of non-recurrence, is not borne out by results.

2. That the main object of treatment is the relief of the infection and inflammatory changes, and not merely the removal of gall-stones. So long as there is no recurrence of the inflammatory attacks, there will be no attack of gall-stones.

3. That recovery no infrequently occurs under non-operative treatment, especially in early and mild cases, and particularly after first attacks, before serious local damage has been produced by the infection.

4. Medical treatment should be given a fair trial in all cases in which the patient's physical condition does not warrant operation, and with the numerous patients who refuse operation. In many such cases Anderson asserts he has seen complete and permanent recovery from all symptoms of the disease.

5. Medical treatment is indicated in many cases as a preliminary to operation, and in order to allow the acute infection to subside as far as possible.

6. Medical treatment is indicated in all cases after operation to allow of complete subsidence of the infection, and, if possible, to prevent reinfection and recurrence.

7. Anderson believes that it would make for clearness of thinking and give definiteness to therapeutic aims if we adopted the suggestion of Naunyn and gave up the term cholelithiasis, and classified these various infections of the biliary passages and cholangitis with such qualifying terms as simple, catarrhal, suppurative, gangrenous, calculous, etc., according to the condition present in the particular case.

The writer advises against operation in

any case unless it is definitely contraindicated, but, after explaining the possibility of failure, and that operation may eventually be required, Anderson does not hesitate in early and mild cases, and especially after first attacks, to give medical treatment a thorough trial, and has found that in many instances excellent and permanent results have been obtained.

Congenital Syphilis Twenty Years After Infection of the Mother.—Boas (Dermatol. Wochenschrift) mentions a rare case of transmission of syphilis at such a remote period. The woman, who had been a prostitute, was treated in a hospital in 1891-1892 for early syphilis. Since that time she never had any signs of the disease. Two years after her sojourn at the hospital she married. Her husband never showed any signs of syphilis and a Wassermann test with his blood was negative. The woman has had 12 pregnancies; 17 years ago a dead child; 15 years ago a boy, living, who shows a positive Wassermann; 12 years ago a child that died of syphilis after some months; 10 years ago premature birth with dead child; 9½ years ago an abortion; 9 years ago a boy, living, who shows a positive Wassermann; 8 years ago another child, living, who shows a positive Wassermann; 7 years ago a daughter who died at an early age; 6 years ago an abortion; 5 years ago another child, living, who shows a positive Wassermann; 4 years ago a daughter who died at an early age of convulsions and finally at the end of 1912 another child that died of syphilis.

It is of this child that Boas reports the history; it was born at term 20 years after the infection of the mother. At birth it showed not a single lesion but 1½ months later it developed a coryza which was regarded as of a syphilitic nature at the hospital. There was no other sign of syphilis but the Wassermann reaction was very strongly positive.

The infant was then treated and received by mouth 0.01 calomel three times a day. It had already received 43 centigrams of calomel when it was taken with a bronchopneumonia and died.

At autopsy, aside from the broncho-pneumonia, there was a typical syphilitic hepatitis, a syphilitic sclerosis of the pancreas and a very clear syphilitic osteochondrosis. Microscopic examination of the liver showed, with the Levaditi stain, numerous typical *treponemas pallida*. After the death of the child the mother was examined but showed no sign of syphilis except that her Wassermann was very strongly positive.

Involution Forms of Gonococci and Their Role as Intra-Epithelial Cell Parasites.—Herzog (Virchow's Arch.) opposes the view of Neisser, Wertheim and of Bumm on the virulence resistance of gonococci as by experimental inoculation and by direct infection the acute inflammation takes place after several days. This time is sufficient opportunity for weakened germs to refresh and recover their virulence. Bumm and Wertheim in their work mentioned this factor of which they did not draw the same conclusion but insisted upon the virulence resistance. The supposition that weakened gonococci can, in a short time, recover is supported by the following experiment: germs that have undergone progressive metamorphosis recover upon experimental nutritive media and grow luxuriantly. From this fact it must be concluded that the same phenomenon under favorable conditions can take place in the human urethra. And to this must be added the rapid exuberant growth of the gonococci. The possibility of an extension of a chronic gonorrhea from the front inwards is explained by the author in the following way: in phagocytosis there take part not only leucocytes but also epithelial cells. The leucocytes are able to completely disintegrate the gonococci, the epithelial cells not. If through destruction of some of the leucocytes, living germs become freed and if they rapidly develop to strong organisms there takes place another outflow of leucocytes, living germs become freed and if they rapidly develop to strong organisms there takes place another outflow of leucocytes. This occurrence can be repeated until the gonococci are completely destroyed. If on the other hand, the gonococci freed from the disintegrated pus cells do not develop to sufficient strength to occasion irritation a new outflow of leucocytes, for defensive purposes, does not occur. In place of the leucocytes there is an outflow of weakly acting epithelial cells and the gonococci are in part dragged along with the lymph stream into the deeper layers of the tissue. The extension of a gonorrhoea calls forth also a chronic inflammation.

By experimental cultivation, the author found various forms of gonococci: normococci (coffee bean shaped) and microgonococci (dumb-bell forms and double spheres). The smaller the gonococci become the less the stain with methylene blue; they take a lavender-gray and finally a red stain. The diminution in the size of the gonococci is due to the formation of involution forms. The micrococci are gradually destroyed. The various involution forms which take the most various shapes and microscopically appear unusually small must

not be conceived as of living character but merely as growth-forms of bacterial germs. While the involution forms, in experimental cultivation, are to be found in a very short time, in the urethra they only make their appearance when the gonococci by fixation in the cells are withdrawn from direct contact with the freely circulating body fluids.

The influence of bile acid salts on gonococci is worthy of notice. Normal germ forms are not influenced by 1 per cent.—2 per cent. sodium taurocholate. By 10 per cent. after several hours there is incomplete lysis and by 20 per cent. complete lysis after several hours. Micro-forms are destroyed in 12 hours by a 5 per cent. solution. The author's final conclusions are:

(1) The gonococcus is an obligate epithelial-cell parasite.

(2) The gonococcus produces involution-forms on mucous membranes which may occur either in a disseminated arrangement or in colonies intracellularly.

The Medical Treatment of Cholelithiasis.—Anderson (Canadian Medical Association Journal) says that the treatment of which condition is at once so common and so important, claims that apart from the question whether gallstones may or may not be dissolved, so long as the teaching, based on autopsy records and clinical experience was accepted that in over 90 per cent. of all cases they remained latent, medical treatment had a safe objective point. If the infection, bile stasis and attendant inflammation, which have been shown to be the causes of gallstones, could be removed, and they remained merely as innocuous occupants of the gall-bladder, then a natural tendency to a virtual cure was indicated. If, therefore, in a given case, this latent condition could be brought about and maintained, both the physician and the patient were satisfied with the results. It must be admitted that in many cases formerly regarded as latent, fuller knowledge and improved diagnostic technique would now recognize gallstones as the underlying cause of digestive disturbance, flatulency, etc. We are greatly indebted to surgery for this knowledge, but it has not established the view that gallstones are never latent.

Apart from his experience with large numbers of cases, and the opportunity of seeing the pathological conditions at operation, the advantages of observation are not all on the side of the surgeon. The physician is usually able to follow his cases over a longer period, and often has a better opportunity to study, not only the initiation of

disease, but ultimate results. The surgeon, moreover, deals with the more severe cases, those which have resisted medical treatment: in other words, the class of cases which all are agreed properly belong to the domain of surgery, he naturally takes a more serious view of the disease, and thus of the hopelessness of other than surgical relief. Dealing only with surgical measures, he is not in a position to estimate as fully the value of non-operative treatment as the physician, who has seen even a limited number of cures without operation.

While accepting the data supplied so abundantly by the surgical clinics, one may properly question if the broad generalizations sometimes made therefrom are in accordance with established facts. The teaching of Naunyn, Kehr, Aschoff, and others, that stagnation of the bile and infection are the chief underlying factors in the development of cholelithiasis, is now generally accepted. Obesity, pregnancy, ptosis of the viscera, faecal stasis, infections in the portal area, and metabolic disturbances, are well recognized contributory causes. Gallstones are the results of these factors, and not the primary cause of the disease. If the basis of rational treatment be the removal of the cause of the trouble, are we warranted in concluding that a cure has been effected when the removal of these causes is only incidental to, and not the main object of treatment?

The spectre of danger from the development of serious, perhaps irremediable, complications from delayed operation is usually raised by the surgeon, his views naturally being based on the class of cases coming to him for relief. But it will scarcely be argued that his experience represents the average of those who have to deal with cases of all degrees of severity, from the mild or latent to the most serious. In proportion to the general incidence of gallstones, the occurrence of many of these most serious complications, such as cancer, gangrenous cholecystitis, gallstone ileus, etc., is so infrequent that the danger of their development in a given case is too remote to constitute in itself a reason for operation as a general procedure. It is correct to assume that recourse to early operation would appreciably reduce the general mortality by forestalling these rarer complications, when in the majority of all cases gallstones are latent, or at least do not produce symptoms sufficiently definite to permit of a diagnosis, and especially when the course of the disease will give timely warning in most of the diagnosable cases, and direct them to the surgeon? I believe that many physicians will agree with Kehr that

it is fortunate that we are unable, by the X-ray or other means, to recognize the quiescent causes, if the presence of gallstones per se is to be taken as an indication for their removal.

But again it is claimed that operative cures are permanent whereas medical cures are only palliative. This statement, however, is hardly in accordance with our knowledge of the pathology of the disease or our clinical experience. After operations the bile stasis, infection and inflammatory changes must subside, and the underlying causative factors be removed, before the patient can be regarded as cured.

If the gall-bladder is not removed, and if the causes underlying the original infection which produced the gallstones remain or recur, on what grounds have we a right to claim that the stones will not form again, as in the first instance? Operative procedures have not been in vogue a sufficient length of time to determine definitely how frequently recurrences may take place, but that they do occasionally is well known.

A point which is too frequently overlooked after an acute attack, is the necessity of prolonged rest in bed, not alone until all symptoms have disappeared, but until pain, and tenderness on pressure, have passed away and sufficient time has elapsed for the subsidence of the local inflammation of the bile passages, re-establishment of drainage, and the disappearance of infection. This usually necessitates three or four weeks absolute rest in bed. Hot poultices are of value in acute stages. I do not believe that any case has been given the full benefit of medical treatment where complete rest for some weeks has not been carried out. In the subsequent management of cases, the treatment of visceroptosis by a suitable abdominal support, the avoidance of faecal stasis and recurring infections in the portal area (appendicitis) are very important. It is interesting to note that prolonged rest is an essential factor in the surgical management of the disease.

"In conclusion, I believe the following statements are fairly warranted by our present knowledge of the disease:

1. That while surgical procedure is frequently the best, and often the only means offering a chance of relief, its advocacy, based on certainty of cure and assurance of non-recurrence, is not borne out by results.

2. That the main object of treatment is the relief of the infection and inflammatory changes, and not merely the removal of the gall stones. So long as there is no recurrence of the inflammatory attacks, there will be no attacks of gallstones.

3. That recovery not infrequently oc-

curs under non-operative treatment, especially in early and mild cases, and particularly after first attacks, before serious local damage has been produced by the infection.

4. Medical treatment should be given a fair trial in all cases where the patient's physical condition does not warrant operation, and with the numerous patients who refuse operation. In many such cases I have seen complete and permanent recovery from all symptoms of the disease.

5. Medical treatment is indicated in many cases as a preliminary to operation, and in order to allow the acute infection to subside as far as possible.

6. Medical treatment is indicated in all cases after operation to allow of complete subsidence of the infection and, if possible, to prevent re-infection and recurrence.

7. I believe that it would make for clearness of thinking and give definiteness to therapeutic aims if we adopted the suggestion of Naunyn and gave up the term cholelithiasis and classified these various infections of the biliary passages as cholangitis, with qualifying terms such as simple, catarrhal, suppurative, gangrenous, calculous, etc., according to the condition present in the particular case.

Personally, I never advise strongly against operation in any case unless it is definitely contraindicated, but, after explaining the possibility of failure, and that operation may eventually be required, I do not hesitate in early and mild cases, and especially after first attacks, to give medical treatment a thorough trial, and have found that in many instances excellent and permanent results have been obtained."

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Prevalence of Venereal Diseases.—

Barrett says (Australian Medical Journal) it is estimated that in Berlin there are 85,000 fresh cases of venereal diseases annually, that is, one twenty-fifth of the whole population. In Paris they think that 100,000 are infected with venereal diseases annually, or one-twenty-seventh of the population. In New York, Morrow estimates that there are 200,000 infected person walking the streets, and Bierhof believes this to be an underestimate. The proportion of persons infected annually is probably the same as in Paris and Berlin. In all these cities about one-twelfth of the total adult male population are infected annually, and about one-thirtieth of the total adult females—roughly one twenty-fifth of the whole inhabitants.

Blaschko gives his opinion that in Berlin every man who has reached the age of 30 has had gonorrhea once or twice, and every fourth or fifth man has had syphilis. They estimate that in London 200,000 fresh cases of venereal disease occur annually. The writers go on to say these are not statistics, they are only computations, and as such are open to reasoned criticism.

Remarking that it is customary to say that syphilis is decreasing, the writer says that this belief is widely held because so many practitioners either fail to see it, or are of opinion that it is not as common as it used to be in their earlier experience. There is no doubt that the grosser manifestations are not so much in evidence as they used to be, and for this there appear to be several explanations. In the first place it is suggested that a partial race immunity has been established. If the subcommittee of the London hospital are correct, and 12 per cent. of the population are infected with syphilis, there is much color for this opinion. But Mott points out that only three or four per cent. of syphilitics develop disease of the nervous system. It has, however, been shown that certain women with whom successive students cohabited conveyed a form of syphilis to those students, which ended in disease of the nervous system. Noguchi has shown that there are three strains of spirochaete, and the question arises whether there are several varieties of syphilis, and that some are less frequent and others more frequent. Furthermore, medical men understand its treatment better and more vigorous attacks are made upon it in its earlier stages.

All these causes play their part in the modification of the clinical phenomena. But notwithstanding this, the fact remains that if the problem of distribution be tested by the amount of nervous disease, i. e., general

paralysis and tabes existing, there is no diminution since the relation of general paralysis and tabes to the population remains the same as, or greater than, formerly. There does seem, however, ground for believing that the latent or submerged form of syphilis is more common than before, but that the grosser external manifestations are not so common.

The Committee of Prophylaxis of Venereal Diseases, Washington State Medical Association, state that 80 per cent. of all men in large cities have had gonorrhea once or several times, 45 per cent. infect their wives, 80 per cent. of all operations upon women for diseases of the uterus and adnexa are caused by gonorrhea, and that 20 per cent. of all blindness results from the same cause. Bierhof estimates that there are in New York today one million persons affected with venereal diseases, of whom 800,000 are suffering from gonorrhea. Morrow states that venereal diseases contribute a sum total of morbidity of nearly double that of all other infectious diseases, both acute and chronic. He thinks that 1½ million men are annually infected with gonorrhea in the United States.

If we turn to Germany, where statistics are compiled with extreme care, we find that the total is very large. Of about 12 million persons insured in the German Empire, 750,000 are annually infected with some form of venereal disease; 100,000 persons are treated on an average daily for venereal disease in Germany, and estimates given by the Prussian Government state that 500,000 persons are infected with venereal disease yearly. Another and later authority puts it as 773,000.

Now, the writer says, it is unnecessary to labor the point. In every portion of the world in which the matter is critically examined, estimates are given of the enormous prevalence of these diseases, and it matters little whether the percentage of syphilitics in Great Britain was 12 per cent. or 10 per cent., or whether there were 800,000 or 700,000 gonorrheics in New York—the fact remains that the sum total of disease is very great indeed.

Treatment of Gastric Hyperacidity.—

Rolph (Canadian Medical Association Journal) expresses the opinion that too much attention has been paid to the gastric mucous membrane in this condition. In its simple form, hyperacidity represents a constitutional weakness associated with nervous instability, and treatment of this is definitely indicated.

Only reasonable care is needed in the diet, too strict a dietary doing more harm than

good. Milk is to be recommended, because of its capacity of neutralizing acid. The author found that ten c. c. of ordinary milk would neutralize about twenty-five c. c. of two per cent. hydrochloric acid. Peptonized milk, owing to its content of amino-acids, has an even greater combining power.

Alkalies are indicated to prevent or lessen pyloric spasm, pyrosis, and waterbrash. A combination of magnesium oxide and sodium citrate is best. Belladonna or its alkaloid, atropine, may also be used. Their principal action is not on the gastric glands, limiting secretion, but on the pneumogastric nerves, on which they exert a sedative effect. That chemical hyperacidity is not in itself of great importance is shown by the fact that even with the abatement of symptoms, the acidity usually persists.

It is when a complicating gastritis or ulceration is present that further treatment is advisable. Bismuth, olive oil, silver nitrate, hydrogen peroxide, and aluminum silicate all have their uses. The last named substance reacts with the hydrochloric acid to form aluminum chloride, and has not only a powerful neutralizing effect, but is also astringent and antiseptic. For constipation, an important hindrance to recovery, artificial Carlsbad salts are useful.

In the cases in which organic changes elsewhere in the abdomen can be found, surgical intervention will often yield an apparent cure, though frequently this is only temporary. Sometimes an operation seemingly having no relation to the gastric condition will bring relief, as in a case of the author's in which well marked gastric ulcer symptoms—pain, tenderness, stasis, vomiting, and repeated hemorrhages—disappeared after the opening of a small acute abscess in the thigh, and had not recurred two years later. Where adhesions follow abdominal operations, on the other hand, the patients are left in a worse condition as regards digestion than before. Not infrequently hyperacidity is due to the presence of a small epigastric hernia; the possibility of this should be kept in mind.

Maemorrhagic and Gangrenous Varicella.—Storrie (British Journal of Children's Diseases) reports two cases and reviews previous literature. Recent writings shows that varicella, previously considered a benign disease, may present more or less severe complications. Fatal cases occur with nephritis, septicæmia and pyæmia, severe inflammatory eye conditions, gangrene and hæmorrhage. Tuberculosis is not seldom associated with the gangrenous and hæmorrhagic types, fevers, measles, pneumonia, scarlet fever, etc., has recently oc-

curred. Many cases, however, occur in previously healthy children, probably due to some idiosyncrasy. Three classes of cases can be differentiated: (1) With superficial ecthymatous sores, (2) "varicella gangrena," (3) with single and extensive lesions. The first and second types occur more frequently in unhealthy children, the third type appears to be a different condition clinically and pathologically. There is in this latter a single lesion, the gangrene extending deeply, even so as to expose bone, muscles and glands. Constitutional symptoms are severe, and fatal results are common from septicæmia and pyæmia. In some cases there is a previous hæmorrhage condition—probably to be taken as evidence of the severity of the infection, or of a close pathological association between the hæmorrhagic and gangrenous forms. Both the reported cases occurred in patients convalescing from scarlet fever. Gangrene was extensive and general symptoms marked. The younger patient died with septicæmic symptoms, and in this case hæmorrhage preceded the gangrene. The elder child recovered. In each case staphylococcus pyrogenes aureus was present, and in the fatal case also a few streptococci.

Some Fatal Cases of Eczema in Children.—Hichens (Brit. Jour. of Children's Dis.). Out of a series of 28 cases of eczema treated in hospital during 12 years no less than six died; all under the age of eight months. Five of the fatal cases are mentioned in detail. Two died within a few days of admission; a third developed vomiting and diarrhœa with death in 24 hours after the onset of symptoms. The remaining two cases were improving rapidly, when without warning symptoms of shock and collapse occurred with a fatal result within 24 hours. The author does not believe that there could have been sufficient absorption of metallic poisons to cause death, nor does he blame the "status-lymphaticus," but suggests, on the other hand, that the weeping surfaces of the skin were a manifestation of some internal toxæmia, finding a vent on the surfaces of the body, and that the healing of the skin too rapidly forced the poison upon the internal vital centers with fatal effect; or, on the other hand, that the fatal issue was due not to a toxic, but to a physical alteration in the balance of the fluids of the body causing congestion of fluids in the brain, and a fatal effect by pressure in the fourth ventricle.

Diagnosis of Pulmonary Tuberculosis.—Lee (Brit. Jour. of Children's Dis.) says that the diagnosis is more difficult in chil-

dren than in adults. Usually no sputum can be obtained for examination. A cutaneous reaction to tuberculin gives no information as to the organs affected. X-ray examination requires the highest expert method and interpretation, and is often not available. Dependence must be placed, therefore, on accurate physical examination by percussion and auscultation. In adults in the upper lobe of each lung, a focus of incipient tuberculosis can be detected by careful percussion in the inner part of the first and second intercostal spaces in front, and the inner part of the supra-scapular space; a second focus in the outer part of the same spaces in front and behind; a third in the upper part of the lower lobe on each side at the posterior end of the scapular spine. These six dull areas are present in all cases of early pulmonary tuberculosis, and are not produced by any other morbid condition. Many other small dull areas may also be found. The position of these areas may also be found. The position of these areas is practically invariable—they are nearly symmetrical in the two lungs, but show certain differences depending on the anatomical differences. In children percussion is less easy than in the adult, and difficulty is caused by the greater frequency of bronchopneumonia, by lobular collapse, and by the ready passage of a tuberculous infection from the lungs to the various glands, and even back again to the lungs by contiguity or rupture of a gland into a bronchus. In spite of these difficulties, the six typical dull apical areas can be detected in tuberculous children, and in cases of apparent simple catarrh or ordinary bronchitis their presence confirms the results obtained by the cutaneous tuberculin reaction.

Treatment of Cutaneous Affections by Dymal.—Marshall (Medical Press and Circular, London) relates his experiences with dymal—a substance consisting chiefly of the salicylate of didymium—in the treatment of various skin diseases. As an antiseptic and dusting powder dymal has been used for some years in surgical practice, especially in wounds, ulcers and burns. Its antiseptic properties were investigated by Foire, of Rome, who found that the addition of $\frac{1}{2}$ of 1 per cent. of dymal to bouillon prevented the growth of certain forms of streptococci and staphylococci. The author has had good results in such cutaneous disorders as acute pustula sycosis of the chin, chronic dermatitis of the palms, disseminated eczematous patches, furuncles, chronic eczema with fissures, and eczema with exudation. Except in the last case, dymal was used in the form of a pow-

der. Being non-toxic, adhesive, and in a state of fine subdivision, dymal is very suitable for employment in this fashion, and it does not cake on the surface. Other cases where the use of iodoform seemed to be indicated, dymal was given a trial instead, with an excellent result. An ointment from the drug is well tolerated, and it makes a capital antiseptic and protective application when made up with lanoline, which is vastly superior to the time-honored zinc ointment.

Placenta Previa.—Groom in (Medical Press and Circular) discussed the practical management of placenta previa. It is a complication involving a maternal mortality of eight per cent., and a fetal mortality of over seventy per cent. Each case must be treated on its merits.

Special attention is drawn to the lower uterine segment which develops only during pregnancy, being completely formed in the process of labor. It is difficult to determine whether it is uterine or cervical, or both. Whatever its origin, it is a phenomenon of labor, and therefore a knowledge of its requisite to the successful treatment of placenta previa. Its upper limit is Brandl's ring; posteriorly it is in relation to the rectum; anteriorly to the bladder and urethra; latterly to the broad ligaments, with the ovaries and tubes. On its anterior surface the broad ligament is reflected, loosely attached. It is looser posteriorly, the muscular tissue, imperfectly and loosely arranged, mostly longitudinal, running from the cervix up in a slightly curved manner. It is the entire absence of circular fibres which prevents the closure of vessels. The muscular layer thin, it gradually gets thinner with retraction and contraction of the upper part of the uterus, still further thinning out as the head descends. When the placenta is situated in this region it interferes very materially with pregnancy and labor; also with the accommodation of the child; also with contraction of the uterus, causing inertia and bleeding.

As the os dilates, the placental area gets too large for the placenta, the vessels are ruptured, and exposure of the sinuses takes place. Thus bleeding goes on, as there are no circular muscular fibres to contract the vessels.

The two outstanding risks are hemorrhage and sepsis. If they could be eliminated placenta previa would be a simple complication.

As to the method of dealing with a placenta previa, there is nothing in its nature absolutely fatal, but these two essentials must be kept in mind.

Three principles are laid down: 1. The

saving of blood, no septic manipulations; 3. The careful selection of a method of delivery suitable to each individual case.

With few exceptions, once a placenta previa is diagnosed, the sooner the uterus is emptied the better. TempORIZING is only advisable where the hemorrhage is very slight; or in a hospital perhaps. There is a great advantage in treating these cases in a well-appointed hospital.

Where the placenta is marginal and can be treated by rupture of the membranes and subsequent delivery by forceps is not the class of cases dealt with, but rather those cases where there has been very profuse hemorrhage, where the cervix is either closed or admits, perhaps, two fingers, and where the placenta is flush with or overlaps the os internum. The best thing to do here is to pack the vagina. For this, four distinct advances can be claimed: 1. It stops hemorrhage; 2. It gains time—to; 3. Stimulate and nourish patient; 4. If need be, to send her to hospital.

Everything depends on the way the packing is managed. This is best and most satisfactorily done under an anesthetic—packing with wet sterilized cotton wool, with speculum and dressing forceps, until the canal has been completely filled. The other essentials are an abdominal binder and a firm, tight perineal bandage. No packing is possible without an opiate. The pain is unendurable without it, and furthers the dilatation.

When this has been done the blood has been conserved. Croom finds in many instances with the plug in situ, and the woman comparatively out of danger, external version can be done with advantage and comparative ease.

Now when this version has been performed and the patient's general condition improved, the packing is withdrawn and the condition of the cervix ascertained with the gloved hand. As cervical tears are responsible for a great many deaths, and as it is better to avoid artificial dilation and accouchement force, with the gloved hand a foot can be pulled down slowly. As the leg descends it has three effects: 1. It stops hemorrhage; 2. Dilates the cervix; 3. Stimulates the uterus. When the breech has entered the cervix it is well to let it stop there; only maintaining such traction as will prevent hemorrhage. How long has the breech to remain there? Until it is delivered spontaneously, which, of course, involves usually the death of the child. If, for any reason the child requires to be delivered quickly, then it should be accomplished partly by traction and partly by supra-pubic pressure.

Now if, when the packing is removed, the cervix is not dilated, then a reapplication of the pack should be made. When this has been removed for the second time there may be sufficient dilatation of cervix to allow of the manipulations above described. If artificial dilation be required, the safest method is Harris' method, by means of the fingers. If a living child is specially desired recourse can be had to the Champetier de Ribes bag. It has these disadvantages: It is not always at hand, except in the hospital; from want of constant use in private practice, it gets hard and brittle, and is then easily ruptured; it has an obvious means of infection. The method of delivery in the half-breech is both safer and easier than the bag.

A very large number of cases of low attachment of the placenta can be dealt with simply by rupture of the membranes, and either spontaneous delivery or delivery by means of forceps.

Even after the child has been successfully delivered, the placenta requires to be artificially delivered. This involves a very considerable post-partum hemorrhage, and it is probably the case that more women succumb to post-partum hemorrhage than the hemorrhage associated with placenta previa.

Neurogenous and Tyrogenous Galactosuria.—Strauss (Neur Centralbl), says that fifteen years ago he showed the relative frequency of dextrosuria in severe and special traumatic neuroses and in Basedow's disease. The doctor refers to the evidence on which this was based. Further, Goldschmidt found sugar in the urine five times after long-continued taking of thyroid-gland extract. Suttler found 40 cases in which there was a combination of diabetes and Basedow's disease. Of these cases, 26 showed symptoms of Basedow's disease first. In eight of them the symptoms occurred together. Kocher's great material showed glycosuria in about 2 per cent. of the cases of Basedow's disease. The alimentary form of glycosuria is not very much more frequent than the spontaneous glycosuria. Strauss calls attention to the specially interesting point connected with alimentary glycosuria and Basedow's disease. He finds that in a considerable number of cases, if one gives 30 grams of galactose on a fasting stomach one will find a condition of glycosuria present. He found it, as a matter of fact, three times out of four, and one of the cases lost its peculiarity after removal of the thyroid gland. This observation has been confirmed by Hirose. The importance of this is emphasized as

causing us to regard the liver more than formerly in that group of organs which come into consideration when we talk of the visceral disturbances of Basedow's disease.

Three Distinct Types of Nerve Cells innervating three different types of muscles.—Bruce (Review of Neurology and Psychiatry) mentions a very interesting paper by Malone in regard to the vagus. The general conclusions are that "the histological character of a nerve cell is an indication of its function. This is seen in the dorsal motor (sympathetic) nucleus of the vagus, which contains centres for the control of both heart and smooth muscle. The nucleus ambiguus gives rise to fibres which supply striated muscle. In the dorsal vagus nucleus two different types of cells are found. In the lemur and in macacus rhesus, the oral portion of this nucleus consists exclusively of small cells, and supplies smooth muscle. As one follows the nucleus caudally, a second type of cell begins to appear. In the lemur the large cells form a fairly compact group dorsal from the small cells; in the monkey their relative position is reversed. Proceeding further caudalwards, the small cells become fewer, and finally disappear, although a few transitional types are seen here and there. These larger cells supply the heart muscle. It is also to be noted that these larger cells are intermediate in histological structure between those supplying smooth muscle and those supplying striated muscle, a fact of interest, as heart muscle is histologically intermediate between the two other types of muscle."

Hysterical Aphasia.—Rolleston (Review of Neurology and Psychiatry) mentions a paper by Citelli, in an Italian review. Rolleston states: "A very successful new method of curing hysterical aphasia. In a paper read before the 15th Section of the 17th International Congress of Medicine, Professor Citelli describes the following method for curing hysterical aphasia. While engaged in quiet conversation with the patient or his friends, fix the back of the patient's neck with the left hand, and suddenly grasp with the index and thumb of the right hand, the sides of the thyroïd and hyoid cartilages, and exercise upon them a pressure which should rapidly be made strong and slightly painful. The patient, alarmed by this procedure, tries to cry out, but should be plied with a number of questions in rapid succession. He thus escapes from the special state of consciousness which rendered him aphasic, and re-

plies in a clear voice. To avoid a relapse, compel the patient to continue speaking distinctly. Citelli has successfully treated four cases by this method, two in men and two in women, including an old maid of 60, who had been aphasic for three years."

The Pathological Condition of So-called Combined System Degeneration.—Lewy (Neurolog. Centralb.) describes some typical cases of this disease, together with post-mortem observations. The writer sums up his observations in the following manner: In the course of various intoxications and diseases which cause a disturbance of the blood picture, an extensive endarteritis without infiltration can occur in the central nervous system, the effects being specially severe in certain places. Around these affected vessels, one finds degeneration of the grey, and especially of the white substance, which gives an opportunity for secondary degeneration. In the short tracts this interference with their continuity leads necessarily to only a short patch of degeneration immediately behind the lesion caused by this malnutrition. In the case of the long tracts, however, running in the dorsal and lateral columns, the effects are of course very marked. The condition is separable from that of multiple sclerosis and of transverse myelitis by the constant absence of infiltration and fever.

The Treatment of Fractures by Direct Extension of the Fragments.—Woodward, in The London Practitioner, says that one cannot avoid too carefully that unfortunate attitude of mind that divorces different methods of treatment. The massage and mobilization methods of Lucas Championnière and the anatomical operative method of Lane should rather be complementary than distinct and opposed to one another. There is no one method of treating successfully all fractures. Instead of consigning all sorts of fractures wholesale to routine methods, much thought and consideration should be given to selecting the procedure best adapted to the particular case. Malgaigne was the first to attempt to treat a fracture by means of a direct pull upon the fragments. Next, Heinecke and Graser "utilized a powerful pair of forceps . . . to grip the os calcis, whereby very strong extension could be brought to bear upon the lower fragment in fractures of the tibia, and reduction maintained whilst a plaster bandage was applied over the leg and foot." Codivilla, in 1903, "applied a well-padded plaster of Paris cast to the leg, and obtained a powerful pull by means of

a nextension frame, the pull acting on the plaster by means of metal strips incorporated with it. Whilst extension was being kept up, the plaster was continued up over the whole thigh and pelvis. A few days later the plaster was sawn through near the site of the fracture, extension again applied, and the resulting gap between the two parts of the case plastered up. By repeating this process Codivilla found it possible to overcome a shortening of as much as three inches. . . . The next step forward in elaborating a satisfactory method of applying extension was due to Steinmann, who published his first experiences in 1907. Steinmann passes a steel pin right through the distal fragment, and by means of his special 'attachment' apparatus, is enabled to employ a degree of extension far in excess of anything that was possible in the days of adhesive plaster."

This apparatus consists of a steel pin about three and one-half to five millimetres in diameter and long enough to allow the ends to project about two inches from the skin on either side of the limb. "The pins are squared towards their extremities, one end being sharp for piercing the bone, and the other blunt, so that a handle may be fitted on for boring. To each end of the pin is fitted a strong curved metal limb. One end is right-angled to fit on to the pin; the other ends cross each other and have numerous holes bored in them, so that they can be adapted by means of a screw to longer or shorter pins. The extension cord is attached by means of a wire stirrup hooked at the ends to fit into the holes."

The pin should not be inserted too close to the seat of fracture, for this would open up tissues infiltrated with effused blood; the medullary canal should not be entered, for the danger of infection is greater than in the spongy bone near the epiphyseal line; and it is important not to pierce any part of a joint or of a bursa connected with it because of the danger of infection involving the joint. In the young the epiphyseal line should be avoided. Iodine disinfection of the site of puncture is very satisfactory. The pin should not be driven but bored in. Incision at the point of entrance of the pin is not necessary, for the pin may be pushed through the skin which will then fit snugly around it "and there is much less chance of granulations reaching the surface and forming a little septic spot from which organisms can travel down the pin." The skin should be drawn upward before the pin is inserted, so as to allow for the downward pull made by the extension. Either local or general anaesthesia may be employed for the introduction of the pin.

Supposing that there is a fracture of the femur above its center, Woodward has the injured limb steadied with sandbags and laid on pillows with the knee and hip joints somewhat flexed. Regarding the direction of the pull, the author says "It is especially easy, with the firm hold and absolute command of a bone that Steinmann's method gives, to bring the lower fragment into any line that the upper fragment may assume. One finds, however, that practically it is not necessary to bring the lower fragment into unnatural positions, for the powerful pull provided by the pins . . . acting through the muscles of the limb actually brings the upper fragment itself into line; so that, as a general rule, the direction of the extending force is applied in the long axis of the limb and in a position that is comfortable for the patient." The weight necessary will vary between ten and thirty pounds. Actual lengthening may be produced by this method, so measurements should be taken and the amount of weight varied accordingly. It is well to produce about one-half inch of lengthening, as this gives the irregularly shaped ends of the fragments a better chance of coming into good apposition. Local splints may be combined with Steinmann extension. The lower fragment may be rotated to any desired degree by attaching a weight to one side of the apparatus. Three to five weeks will be sufficient time for the use of this extension, even three being all that is necessary for transverse and most oblique fractures. "Great care must be taken thoroughly to disinfect the skin and the projecting ends of the pin before withdrawing it, so as to avoid infecting the bone tunnel with skin organisms. After removing the pin, the little skin wounds should be dressed antiseptically until they heal, a process that usually takes only a few days." Steinmann's method is vastly superior to all other extension methods. "The steady continuous pull and the large weights that can be used when required, give a control over the fragments which is never attained by the older methods. Shortening can not only be overcome absolutely but, if desired, the limb can actually be lengthened." Pain rapidly disappears under this form of extension, and there is practically no pain at all at the sites of puncture. Plating has its field, but the author thinks "that there are a number of fractures that would be treated equally well and, indeed, sometimes better by Steinmann's method than by extensive and prolonged carpentering procedures with screws and plates." This method is particularly useful in "comminuted and multiple fractures of any part of

the shaft of the femur, or the tibia, and when from the obliquity and splitting of the fragments much shortening would otherwise occur."

Intestinal Toxemia.—Watson (Edinburgh Medical Journal) considers the manifestations and treatment of intestinal toxemia. From a therapeutic standpoint, cases of intestinal toxemia may be roughly classified into three main groups: Group 1—Cases in which the symptoms and physical signs are comparatively trivial, and which yield readily to simple medical treatment. Group 2—In which the symptoms are more pronounced, and are accompanied by marked objective indications of an abnormal state of the digestive tract, but which are amenable to careful and prolonged medical treatment. Group 3—In which the condition of the digestive tract is so abnormal that medical measures fail to relieve, relief being obtained by surgical treatment. Many factors have to be considered in the treatment of these cases, but the keynote of successful treatment is undoubtedly to be found in the application of antiseptic and aseptic principles of practical medicine. The aims of treatment in every case may be summarized as follows:

(1) To correct the abnormal bacterial activity in the digestive tract, attention being directed both to the small and large intestine. (2) To correct any associated, or it may be primary toxemia, existing in the upper part of the digestive tract, more especially the teeth, tonsils, gums and stomach. (3) To increase the functional activity of the main channels of elimination of the natural poisons of the body, which in the cases in question are usually produced in excess; more particularly the bowels, kidneys and skin. (4) To raise the general tissue resistance of the body by general means, attention being specially directed to improving the tone of the central nervous system. (5) In appropriate cases endeavor to raise the resisting power of the tissues by the use of vaccines. After noting rest, diet and treatment of the bowels, he states, that an important point in the treatment consists in stimulating the functional activity of the kidneys. A deficiency in the total amount of water, combined with excessive acidity is very commonly met with. A simple and efficient way of stimulating the kidneys consists in the administration of twelve ounces of hot water three times a day, on an empty stomach, preferably in the early morning, one hour before the midday meal, and last thing at night. In cases associated with high acidity of the urine, with the presence of catarrhal cells, benefit is obtained by the administration

of urotropin with acetate of potassium, or other alkali. As to vaccines, he is quite satisfied from close observation of many cases that the use of vaccines when carefully administered is of value in supplying the final stimulus required to enable nature to overcome the effects of the poison. He favors an autogenous vaccine prepared from the *B. coli* strain of organisms obtained from the stool.

The Manner of Mercury's Action.—Eason (Edinburgh Med. Jour.) discusses interestingly the manner in which mercury probably acts when applied in the treatment of syphilis.

According to Blumenthal the liver appears to play an important part in the action of mercury. He believes that this is secondary to the mobilization in the liver of protective substances which form with the mercury the specific mercurial combination.

In these views he is supported by Schrauth and Scholler. In further support of his views Blumenthal adduces the fact that all mercurial combinations hitherto found active in the treatment of syphilis are fixed in the liver, while those which are not so fixed have no such therapeutic value, while those which are not so fixed have no such therapeutic value. Accordingly, the efficient treatment of syphilis by mercury must depend on the efficiency of the liver reaction. The observations that have been made on silver suggest that its method of action is somewhat similar, viz., by the formation in the body of a specific silver compound. Rosenstein, Wolff-Eisner, and others have also proved that silver stimulates protection processes, as shown by hyperleucocytosis.

When the bacterial action is an indirect one, as in the case of mercury and silver, it is not surprising that animal experiments frequently gave results which do not harmonize with clinical experience. And this is equally true whether the indirect action is due to the formation of a specific combination of the metal or to the production of protective substances. Such processes will vary in different species of animals in rapidity and in degree, and these variations in response determine the effectiveness or ineffectiveness of the chemical substance employed.

With such indirectly acting substances similar variations, usually within narrower limits, will be found also in individuals of the same species. The capacity of the organism to react for the formation of healing substances is of vital importance. It is thus intelligible that in apparently analogous cases strikingly favorable and unfav-

vorable results may be obtained, depending on the presence or absence of sufficient reaction. In the case of substances which act directly reaction plays no significant part.

Pituitrin in Sixty Cases of Labor.—Hendley (British Medical Journal) makes a report. The doctor says that pituitrin, or pituitary infundibular extract, is now becoming generally accepted as a valuable aid to the obstetrician. Its property of inducing strong rhythmical contractions of the uterus, first pointed out by Dale, is so marked that it is surprising that it has not been more generally adopted by the practitioner. In these circumstances, this record of sixty cases may prove a sufficient stimulus to those who have not experienced its merits to induce them to try it in the early future.

It is necessary, however, to observe ordinary caution in its administration, and great care should be taken where there is any obstruction. It is a very valuable aid toward shortening the long and often exhausting first stage of labor, especially in those cases in which the membranes rupture early, and a dry labor results.

It has been proved in his hands to be a powerful remedy in cases in which shock and collapse have supervened on prolonged chloroform anesthesia, not infrequently inseparable from a difficult case of contracted pelvis. In patients of a nervous temperament pituitrin has also a great influence, and the excitement is frequently calmed in an extraordinary manner.

Recovery is almost invariably hastened, and patients who have previously had pituitrin nearly always ask for its repetition. Hendley asserts he has never had a case of postpartum retention of urine since using this remedy; indeed, in one case in which it might reasonably have been expected, a free and copious emission of urine resulted within one hour of its administration. As a controller of hemorrhage pituitrin ranks very highly in his estimation; in one case it controlled the hemorrhage when a previous injection of ergotin had failed. Some writers have recorded postpartum hemorrhages as a sequel of pituitrin administration, when delivery of the child did not take place until an hour or more after its administration. Hendley has observed this on a few occasions, but if a second injection be given this does not as a rule occur. In any case a further dose will almost always control the hemorrhage, as it did in three of his cases. In one case the patient in five previous confinements had had postpartum hemorrhage,

while on this occasion it was particularly noticeable by its absence.

The best routine method for the administration of pituitrin, the writer says, when the os admits one or two fingers, but not before, he injects into the gluteal muscles from 0.75 to 1.0 Cc. of pituitrin; if the child is not born within fifty minutes he repeats if necessary. If postpartum hemorrhage supervenes, a further injection will almost always control it. Care should be taken to make sure that the syringe and needle are quite free from alcohol before filling with the pituitrin, as alcohol is said to interfere with its action.

Emetine and Liver Abscess.—Nott (Indiana Medical Gazette) is of the opinion that aspiration is called for in that very serious class of large acute liver abscesses with acute dysenteric symptoms and grave general depression, and the earlier this is performed the better. He is convinced that drainage with excision of a portion of a rib in this class of a case is a very fatal procedure. He advocates repeated aspirations with the exhibition of emetine both subcutaneously and into the cavity of the abscess after aspiration, though probably the former alone is equally efficacious and more certain. This procedure in some cases will be sufficient to bring about recovery, in others it will enable the general strength to be recuperated, the fever to largely subside, and it may be possible after several aspirations to drain by the open method with some chance of success.

For large single abscesses of a less acute character seen in a late stage and in patients in reasonable condition, Nott would aspirate at least once, but in this class of cases he quite thinks under good conditions as regards maintenance of asepsis that there is a good deal to be said for immediate incision and drainage.

For smaller superficial abscesses such as those met with in the left lobe of the liver, if diagnosed in an early stage, he would aspirate; in a later stage when the skin is involved he would incise. In any case this class does well, and statistics which include a number of such cases will always be good.

The Present Position of Vene-Section.—The Canadian Medical Association Journal for April, 1914, contains an article by Rudolf in which he reminds us that the old practitioners used to bleed by cutting the skin and vein at one incision, but nowadays it seems safer to expose the vein by an incision right over it, and then incise it by a second cut. Rudolf finds it is much easier to do this if the vein is picked up

diverting into the hands of purely commercial men that function which should remain the prerogative and the glory of the medical man.

X-Ray in Skin Disease.—Dore (British Medical Journal) says properly applied X-ray treatment is of undoubted service in dermatology. The pastille of Sabouraud and Noire affords a useful means for measuring an exact dose of X-rays, and is now commonly employed as a standard of measurement in this country. The doctor finds that in psoriasis the X-ray treatment is most suitable for obstinate localized patches, and these rarely fail to respond to three or four half-pastille doses, repeated at intervals of a week. Repeated small doses seem to give better results than full pastille doses. Inflammatory reaction is unnecessary and harmful. In chronic eczema X-rays are often successful where other measures have failed. Here again half-pastille doses are best. Cases of lichen simplex and chronic lichen planus, including the hypertrophic variety, can be relieved by X-rays in pastille doses. The other affections discussed by the author in relation to this treatment include acne, vulgaris, cocogenic sycosis, keloid, alopecia areata, etc. X-ray treatment is mainly symptomatic, and temporary success is often followed by recurrence of the disease, but beneficial results can be obtained in a large number of chronic cutaneous affections which are refractory to other methods of treatment.

Hygiene of High Blood Pressure.—Llewellyn (Australasian Medical Gazette) says that the proteins should, of course, be of varied character. Llewellyn has gradually come to the conclusion that, notwithstanding the bad reputation of "red" meats, the most valuable meat food is slightly underdone beef. He allows from one to two ounces of meat food (varying with the protein content) daily. The object of the physician should be to select mainly tasty foods which are rather bulky and of low protein content. Among vegetables and fruits, the following are exceptionally useful: Cauliflower, celery (boiled), onions (boiled), vegetable marrow, the stems of silver beet (boiled), tomatoes, grapes, ripe peaches, bananas. Either boiled onions or boiled celery taken daily for a time appears to have a value in producing a feeling of well-being, and the same may be said of grapes. Soups, broths, and meat extracts are absolutely forbidden.

The restriction of the proteins is sometimes followed by an abnormal appetite for carbohydrates. The patient should be en-

joined to exercise some self-restraint, even at the expense of some of his surplus fatty tissue, and the craving will usually diminish after a week or two. The filling of the stomach to satisfaction is one of the commonest causes of sudden rise of blood-pressure accompanied by angina. One effect of the new routine is an increased capacity of the stomach to tolerate fatty foods. If the diet prescribed is too poor in carbohydrates or fats when the stomach is not filled to satisfaction, the patient will lose weight to an undesirable extent, and less bulky foods of higher caloric value but similar protein content must be substituted for some articles of the diet.

The taking of liquids with solids is strictly forbidden. A meal of solids and liquids is a far more potent factor, Llewellyn believes, in the production of anginal attacks than one of the solids alone. No liquid should be taken until at least an hour after a meal. The total intake of liquids—even water—should be reduced steadily to a degree to be determined by the circumstances of the case. A cup of tea may be taken on arising in the morning, but the taking of solids apart from meals is not allowed. Alcohol is strictly forbidden in every case. If the patient has been long habituated to its use, the withdrawal is made gradually. The use of common salt should be restricted, and no article of diet rich in potassium should be taken in large quantities. Rice is preferable to potatoes. Then the withdrawal of proteins should usually be effected gradually. In a few cases in relatively good general condition, however, Llewellyn has made a big reduction forthwith and with no untoward results.

Exercise of Voluntary Muscles.—Little need be said upon this subject. A walk should be taken by all patients who can undertake it with safety an hour before meals. It should be sufficiently brisk to put the patient somewhat out of breath, and, if possible, to induce perspiration. Where it is practicable, however, mountain climbing is the ideal exercise.

Massage and forced respiration may be employed where walking is impracticable, or even as an adjuvant thereto. Massage should be general, special attention being given to the abdomen.

Relative Mental Rest.—Rarely should the busy man be taken from his work altogether, unless to where he may indulge in mountain climbing in the company of cheerful friends. Having nothing to do begets worry and habits of introspection; and symptoms which were disregarded in the stress and excitement of business are apt

with a fine pair of forceps. No stitches are necessary. Recently he has been using a method which is neater and cleaner. It consists in puncturing the vein through the skin with a sharp needle of 2 mm. diameter. The blood flows freely through this, and if a piece of tubing, previously filled with water, be attached to the needle and this be led into a vessel, then as much negative pressure may be used as desired, and thus the chances of clotting in the needle are lessened.

Conclusions: In many cases venesection is the most powerful method of treatment at our command, and, if used with great discretion, seems to be free from any bad effects. It is often indicated in the following cases:

(a) Heart failure, acute or chronic, with marker cyanosis.

The Art of Prescribing.—Luff (British Medical Journal) says that potassium iodide is a drug that very frequently is prescribed in the treatment of the various forms of fibrositis, and invariably orders it in the following combination. Taking an average dose for an adult, it consists of: Potassium iodide 10 grains, the compound glycerophosphate syrup (B. P. C.) 2 drachms, spirit of chloroform 12 minims, and peppermint water to the fluidounce. The compound glycerophosphate syrup disguises the taste and counteracts the depressing effect of the iodide, while the spirit of chloroform and peppermint water act as preservatives, and so prevent the bacterial growth which otherwise would occur in the diluted syrup.

An extremely useful mixture for the relief of irritable cough, and especially of the troublesome post-influenzal cough, consists of morphine hydrochloride 1-24 grain, heroin hydrochloride 1-24 grain, apomorphine hydrochloride 1-48, dilute hydrochloric acid 5 minims, syrup of Virginian prune ½ drachm, and chloroform water to half an ounce. This constitutes the tablespoonful dose, which should be taken every four hours. The medicine is very palatable, and the presence of the hydrochloric acid effectually prevents the precipitation of any of the alkaloids.

For the relief of pain, when the employment of morphine is not desired a combination of analgesics is much more effective than the use of one alone. A most useful prescription for the relief of the pain of sciatica consists of novaspirin 7 grains, pyramidon 6 grains, quinine salicylate 1½ grain, and codeia 1-3 grain. This is prescribed in a cachet, which is to be taken every four hours.

A simple but effective medicine for the relief of ordinary headache consists of ammonium bromide 10 grains, phenazone 10 grains, caffeine citrate 5 grains, and chloroform water 1 fluidounce. This constitutes a single dose, which as a rule rapidly relieves the headache, but if necessary it may be repeated in two hours.

The most effective combination in Luff's experience for the internal treatment of acute and subacute gout is a pill containing colchicine 1-70 grain, sugar of milk ½ grain, extract of *nux vomica* ¼ grain, extract of *hyoscyamus* ½ grain, and extract of gentian sufficient to make the pill. The object of the sugar of milk is to allow the colchicine to be triturated with it before working it up with the extracts, as otherwise the minute amount of the alkaloid would not be evenly diffused throughout the pill mass, and so the risk of a poisonous dose of colchicine getting into one pill might be incurred. One pill is to be taken every three or four hours according to the severity of the attack, which is rapidly relieved by this treatment.

Gastric flatulence is a very common and annoying ailment, for which almost immediate relief can be obtained by a mixture containing in each dose aromatic spirit of ammonia 25 minims, spirit of chloroform 15 minims, spirit of peppermint 12 minims, and spirit of cajuput 8 minims. This combination constitutes a teaspoonful dose, which is to be taken in a wineglassful of water whenever the flatulence is troublesome.

For external use in the relief of pain, whether due to fibrositis, neuritis, or neuralgia, the following combination is most useful: Chloral hydrate 6 drachms, camphor 6 drachms, and menthol 3 drachms are well rubbed together in a mortar, when the three solids form a liquid without the addition of any fluid. This liquid should be painted over the painful area and gently rubbed in, when rapid relief from the pain is usually obtained. For those patients who object to the sensation of coldness produced by the menthol the equal parts of chloral hydrate and camphor can be used instead, as they also form a liquid when triturated together.

In conclusion, he begs of the student to endeavor during his studentship to cultivate by every means in his power a knowledge of the art of prescribing, and never to become the instrument by which patients may be tempted to drift into the habit of self-treatment by easily administered drugs—a habit which is tending to displace the true therapeutic art, and which is gradually

—especially as many of these patients present slight symptoms of neurasthenia—to be magnified out of all proportion to their seriousness when complete absence from work is enjoined. Mental work and painful emotion (as Mosso showed) constrict the vessels of the limbs and skin, and determine blood to the splanchnic area. We must choose a middle course for the patient by arranging for a reduction without a cessation of his work.

Warm Baths.—In the average case a warm bath at bedtime is well borne, is an excellent vasodilator, and tends to make the skin act, especially if the bed is warmed before the patient gets into it. Electric light baths are strongly recommended by some writers. Turkish baths are sometimes of considerable value.

Acute Nephritis in Children.—Renault and Siguret (*Annales de Med. et Chir. Infant.*) prescribe bed rest and exclusive milk diet. This is all that is needed in mild cases. When symptoms show the kidneys less permeable to salt and urea, diuresis is promoted and kidney congestion reduced by dry cupping in Petit's triangle, repeatedly applied; Venesection in severer cases and older children, leeches over each kidney or wet cupping in the lumbar region. Moist heat to the chest fifteen to twenty minutes, they say, relieves congestion of the kidneys. They advise against mustard pastes, etc., but have found the full bath at 38C. for fifteen minutes, repeated every three hours, useful, that is, where there are no heart contra-indications. A wet cloth should be kept on the head during the bath. Drugs are too much of a strain on the kidneys, and diuresis is best promoted by reducing the intake of salt and water. If not enough, a cold enema may be given every hour, and decoctions of onions, cherry stalks, or grape juice in small quantities. Calcium chloride may help—0.2 gm. a day for each year of age. Sugars, lactose and glucose may be given to promote elimination of nitrogen—10 to 50 gm. of first in the day—200 or 250 cc. of a 45 per 1,000 solution of the latter. Very little water should be allowed the first two days, then unsalted gruels, gradually adding a little milk, until nothing but milk is given—1.5 liter in twenty-four hours, always warm, sweetened or not. Gradually add other food without salt. A little salt may be allowed after a month, if no edema. Repose in bed, constant warmth and scrupulous disinfection of mouth, throat and nose every day, are the most important measures. Lumbar puncture may prove useful in case of convulsions.

The Treatment of Ringworm.—Foley (*British Medical Journal*) says that ringworm is such an intractable disease, such a bugbear to schoolmasters and parents of children attending school, that any quicker and more efficient treatment than that known to us at present would be welcomed. Hence Foley is glad to bring before school medical officers and others a very simple and efficient treatment which leads to rapid cure. The part, being first washed with a strong solution of sodium bicarbonate, is swabbed with a piece of lint moistened with spirit of ether to remove grease, painted with tincture of iodine, and an ethyl chloride spray immediately applied. Foley finds it best to work with a pair of ethyl chloride tubes in each hand, as a larger area is covered in quicker time. The deeper the disease process the longer the spray must be applied. It should be used until the integument gets china-white and then stopped. It will be found that in twenty-four to forty-eight hours the patch of ringworm has become quiescent. The smallest commencing spots should be looked for and treated in a similar manner; they also will disappear in from a few days to a week. In ringworm of the scalp three or four applications of iodine and spray are required, but on the face or smoother surfaces one application suffices.

Foley has succeeded in curing ringworm of months' standing in one week by this method, and it has never failed him since he first thought it over a year ago. In most of his cases the patients got infected from cattle.

Ethyl iodide readily destroys the tubercle bacillus, and thus might be expected to destroy hyphomycetes; but an ointment of ethyl iodide 25 per cent, Foley found, will blister, and thus his central idea was to obtain a very minute amount of ethyl iodide which might not penetrate further than the outer layer of the skin by painting on tincture of iodine and next applying the ethyl chloride spray. He considered a minute amount of ethyl iodide would be formed at the site of the disease sufficient to penetrate the upper epidermic layers, affected by the freezing action of the ethyl chloride.

Emetine and Ipecacuanha: Their Amebicidal Value in Pathogenic Amebiasis. Carter (*Indian Medical Gazette*) states he has treated 168 cases in the last 18 months with emetine alone or in conjunction with ipecacuanha, and has come to the following conclusions:

Emetine administered hypodermically in

doses of 1 to 2 grains per diem acts rapidly in early cases of uncomplicated amebic dysentery in Europeans and Indians.

Emetine is valueless in bacillary dysenteries. Emetine is a specific in presuppurative amebic hepatitis, and is of marked value in chronic latent amebic colitis which gives rise to the above condition.

The value of emetine in liver abscess is doubtful, and rational operative treatment without the exhibition of emetine gives as good results as it does with the drug.

Before discussing these points further, he deals with the action of ipecacuanha and emetine as checked by the microscope.

Ipecacuanha has no bacterial effect upon *B. dysenteriae*, for it grows freely in a one-ounce solution of ipecacuanha in broth.

It is doubtful if ipecacuanha inhibits the growth of any member of the bacillary dysentery group either grown in pure culture or in conjunction with the ordinary intestinal flora.

On the other hand, there is no doubt as to the amebicidal action of ipecacuanha.

Emetine has a far greater amebicidal effect than its parent drug, and this is apparent in twenty-four hours in all cases of pathogenic amebiasis. Both the pathogenic amebæ and the so-called harmless commensal amebæ rapidly vanish from the stools in early cases of amebic dysentery on administration of a few grains of emetine hypodermically.

If amebic dysentery has lasted for a week or more, he finds that emetine injections destroy the vast majority of the amebal trophozoites in the first twenty-four hours, but the stools rarely become ameba-free under seventy-two hours.

Further, such cases of intestinal amebiasis, even after a week's injections and apparent cure by emetine, have in some instances a tendency to relapse.

The true emetine amebicidal effect is delayed in patients who are confirmed opium eaters, and experience has shown that in spite of vigorous emetine treatment it is from the slaves of opium that we get the cases of rapidly fatal acute gangrenous dysentery. Carter believes this is due not to an antagonistic neutralization of the action of emetine by one of the many opium alkaloids, but to the effect of opium on the intestinal contents whereby the ameba-laden feces stagnate in the pouches of the large intestine.

In the treatment of human amebiasis, the doses of emetine for an adult should be at least one grain per diem, and in severe cases the drug should be pushed without hesitation. Minute doses of 1-6 grain do harm instead of good, as Carter believes they so

sensitize the residual store of undestroyed amebæ in the gut wall as to render them emetine-proof. Such cases pass out from the hospital apparently cured, but are amebal cyst carriers and sources of infection to others.

Emetine and its Value as a Therapeutic Agent in Amebiasis and Other Diseases.—Low (Proceedings of the Royal Society of Medicine) says that an analysis of cases enables one to come to certain conclusions. Emetine is not a specific in the sense that it completely sterilizes the body from amebæ. Relapses after its use occur, and these are by no means infrequent. The drug may be compared with mercury and salvarsan in syphilis and quinine in malaria, where, again, even after long periods of treatment, relapses or recrudescences are met with. Protozoal infections are always very difficult to eradicate, and when anything detrimental to the parasites causing them happens, forms arise which are specially resistant, and though remaining quiescent for long periods, under circumstances favorable to themselves, often give rise to the disease again.

In amebic dysentery the emebæ become encysted, and then apparently the emetine cannot kill them, this stage being a very resistant one. At later periods these become transformed into the living forms again and so produce relapses. Treatment, therefore, for amebiasis must be conducted on similar line to that of malaria by quinine. Suitable doses must be given and kept up for prolonged periods of time. Low therefore gives $\frac{1}{2}$ -grain doses of emetine hydrochloride until 10 grains in all have been taken. Then, if all symptoms have abated, the drug is stopped and the patient kept on a strict diet. Some cases, even after this, relapse, and then a second course of the emetine has to be given, and so on. Sometimes injections are inconvenient, and in these instances keratin-coated tablets may be tried. His experience of these is that some patients can take them without vomiting or any unpleasant symptoms; others are sick for the first day or two, then tolerate them; while a third group keep on being sick each time they take them. In this latter case injections must be substituted. The dose by the mouth is 1-3 to $\frac{1}{2}$ grain, and if not vomited is quite as effective as injections. As regards the latter, it is more satisfactory to inject the drug intramuscularly than subcutaneously. Some stiffness may even then result, so it is well to vary the site of the injection. Some cases do not do so well with emetine as others. Low recently saw a case in which

the stool still showed blood and mucous after twenty $\frac{1}{4}$ -grain injections, and another whose stool was teeming with cysts after a short course of the drug. The efficacy of the treatment is tested by frequent microscopic examination of the stools passed per day, and by microscopic examination for the entamebæ from time to time; these usually disappear very quickly from the stools after the first two or three doses have been taken.

In addition to the emetine treatment a milk diet, and then later a milk and white meat diet, must be insisted upon, and no alcohol in whatever shape or form is to be allowed. The patient should remain a teetotaler for a year or more after all signs of the disease have disappeared.

Amebic abscesses discharging through the lung or discharging externally are greatly benefited or even cured straight away, without surgical interference, by emetine. When an amebic abscess is opened and drained emetine injections should be started at once, as they will help greatly in the healing process.

Cases of amebiasis without signs of dysentery or hepatitis or abscess have also been met with. In these there is a high temperature, this quickly falling, however, and all other signs disappearing on the administration of emetine.

In addition to its use for dysentery, injections of emetine have lately been tried in the treatment of hemoptysis and intestinal hemorrhages. Flandin in France, impressed by the prompt disappearance of blood from the stools in cases of amebic dysentery treated by injections of the soluble salts of emetine, suggested the possibility of the drug being similarly effective in hemoptysis. Eight cases of this condition were treated, and in all of these, with the exception of a galloping case of tuberculosis, the hemorrhage was definitely arrested, the bleeding stopping immediately. No bad symptoms, such as nausea or depression, followed the administration of the drug. In some cases, though all traces of blood may disappear from the sputum, blackish clots may remain for some time. If after one injection there is a tendency for the hemorrhage to return, Flandin gives a second injection twelve hours later, and again on the following day. The doctor's dosage was 0.04 of emetine hydrochloride dissolved in 1 Cc. of distilled water. The arterial pressure was taken both before and after the administration of the drug, but no change was noted either in it or in the coagulation of the blood, or in the blood count.

These results were confirmed in twelve

other cases by other physicians, while Renon also succeeded in obtaining the disappearance of blood from the sputum in two cases of lung carcinoma by the same treatment. The latter observer later tried emetine injections for serious intestinal hemorrhages. The writer quotes Valossopulo, of Alexandria, and Edham, of Salonica, as having good results from these in hemorrhage from a carcinoma of the large intestine, and from a case of mucomembranous enterocolitis. In his own experience Flandin's five cases of severe intestinal hemorrhage, including hemorrhage due to biliary and hypertrophic cirrhosis, hemorrhage after typhoid and ulcerative enterocolitis and chronic nephritis, were treated with rapid and excellent results. Flandin finally states that Raymond also was successful in dealing with hemorrhage of the stomach from a single ulcer and from a neoplasm, and with a severe intestinal hemorrhage after typhoid. Renon advises doses up to 9 centigrammes.

These results would seem to indicate that in emetine we have a useful means of arresting hemorrhage. Why this should be is not altogether clear, but as it has been stated that the drug exerts a powerful local constricting effect upon blood-vessels, it is possible that this is the explanation of its action in these cases.

Salvarsan and Neosalvarsan From the Neurologist's Standpoint.—Harris (Jour. Nervous and Mental Dis.) that the action of salvarsan and neosalvarsan is identical; the majority of syphilologists believe neosalvarsan to be at least as efficient as salvarsan.

The question of toxicity depends largely on the method of administration. It is generally conceded that salvarsan is the more toxic, although neosalvarsan is much more readily decomposed. Milan, Girauld and Duhot have shown that the toxic dose of salvarsan is 15-30 times the therapeutic dose. Iversen and Schriber have given 6.0 gm. in one week. Dujardin has given thirty-eight injections to one patient. Leupold gave during 20 days 7.5 gm. per kilogram to mice. To rabbits he gave 66 intravenous injections during 139 days, in all 11.75 gm., the final doses being fifty times the normal dose per kilogram of weight.

There are three big factors in the question of toxicity. First the decomposition of the drug. Second, the factor of the elimination of the drug. Third, the question of the injection or formation of poisonous proteids either bacterial or autolytic.

The bulk of the arsenic is eliminated by

the kidneys and gastro-intestinal tract, the amounts being about equal. The fact that the arsenic is deposited in the parenchymatous organs, especially the liver and kidneys, leads to a cumulative action. The drug does not remain in the blood very long; Lorenz could find none in the blood after three hours, Saynisch could find none after one hour, Stumpke and Siegfried only found it during the first twenty-four hours.

Stumpke and Siegfried and Morel, Mouriquand and Policard found much more arsenic in the liver than in the kidneys. Ullman found the most in the gastro-intestinal tract, next in the liver, and then the spleen. He also showed that syphilitic tissue has a selective action and contains more arsenic than the surrounding normal tissue.

The arsenic deposited in the various organs is re-absorbed. It is found in the urine from nine to twenty-four days after intravenous injection, although Heuser found it nine months after. Frankel-Heiden found it in the urine after seven months, and Merkuriew found it six months after an intramuscular injection.

Frankel-Heiden and Narassart found that after intramuscular injection there was never more than 1.5 mg. of arsenic in the twenty-four-hour urine, while after intravenous injection there was as much as 5.65 mg. They found that there was from two to ten times as much excreted by the intestines as by the urine.

Since it has been shown that neosalvarsan is at least as efficient as salvarsan and the latter is much more toxic than the former, there would seem to be no reason for continuing the use of salvarsan.

Neosalvarsan has been administered in every conceivable form. The preferable method is the intravenous. Wechseltmann's subcutaneous method is painful and requires an especial technique. The intramuscular method is painful and as shown by Swift is always followed by more or less necrosis, the necrotic material several weeks afterward containing 5-10 per cent. of the injected arsenic.

The much vaunted advantage of the slower absorption in the intramuscular method, has been shown by Swift to be somewhat illusory, 75-80 per cent. of the aqueous solution being absorbed during the first week. The arsenic of these drugs is valuable only when it is in this peculiar chemical combination, and since this is so unstable, the depot in the muscle must of necessity undergo more or less decomposition. In fact, Ehrlich has shown that neosalvarsan, when used subcutaneously, be-

comes oxidized, forming the more toxic para-oxyphenyl-arsenoxide. Probably the same or similar change occurs when it is given intramuscularly.

The method of choice for the administration of neosalvarsan is in the form of the concentrated solution, as recommended by Ravant. A normal dose of 0.6 gm., is dissolved in 8-10 c. c. of sterile distilled water in an all glass syringe and injected directly into the vein.

Of interest to the neurologist is the use of the drug in the subarachnoid space. Canss, teeth in congenital syphilis, should be borne in mind.

The relation of a previous syphilitic infection to some intense forms of anemia, often approaching the pernicious in type, is now generally recognized. It is not surprising that such cases respond extremely well to salvarsan.

An Intensive Treatment of Nervous Syphilis.—Proceeding on the assumption that a gradual and uninterrupted saturation of the tissues with agents employed generally in syphilis offered probably the best chances in nervous syphilis Peterson and Stephenson (Jour. Ner. and Mental Dis.), treated a series of 15 cases as follows: 0.45 gm. of neosalvarsan was administered intravenously every third day for five injections. In cases of paresis, taboparesis and other actively severe infections, this was supplemented by inunctions of mercury (gr. 40 to 60) on the days the patient did not receive the neosalvarsan. Many, in fact, the majority of the unfortunate sequelæ of neosalvarsan, were attributable, in the author's opinion, to faulty preparation or administration of the drug. They considered 75 c. c. too concentrated a solution of 0.45 gm. and invariably used from 90 to 100 c. c. Freshly distilled water was boiled at least five minutes and then cooled to room temperature by running water. The apparatus used was the ordinary gravity one and the method of administration was as follows: 30 c. c. of lukewarm, previously sterilized normal saline solution was introduced, and as this escaped from the container, the neosalvarsan was poured in, and as the last portion left the container, 30 c. c. of lukewarm normal saline were again introduced. Special care was taken that as small amount as possible of the neosalvarsan solution came in contact with the warm saline, lest the warmth of the latter increased the toxicity of the drug.

In the fifteen cases covered by this report, Ellis and Swift, and others, have shown that salvarsan is unsuitable for this method of administration. The matter is

different with neosalvarsan. In 1912, Wechselsmann injected 2 c. c. of a 1.5 to 1,000 solution equivalent to 3 mg. subarachnoidally in a paretic, producing no irritation. Eleven days later 7 c. c. of a similar solution caused no symptoms. The same author also gave 15 mg. to two congenital syphilitic children without causing any reaction. Castilli injected a number of rabbits with 1-2 c. c. of a 1 per cent. solution. Swift and Ellis injected minute quantities in a tabetic, causing severe lightning pains and retention of urine. Marinesco in eighteen patients gave 4 c. c. of a 1 to 800 solution. In the majority, the reaction was severe. In eight patients there was retention or incontinence of urine, three patients had weakness of the lower extremities, and one had anesthesia of the rectum, buttocks and legs. The method certainly deserves further study and would seem to promise much for the future.

Somewhat along the same line is Swift and Ellis's use of salvarsanized serum.

The complications and sequelæ are of two kinds local and general; the former are all eliminated by a proper technic. The general complications are due to improper selection of the patient too large or too frequent doses and errors of technic.

In practically every case it is best to begin either with preliminary mercurial treatment or small doses of neosalvarsan. Patients who are likely to stand the treatment badly are those with a syphilitic or non-syphilitic involvement of some vital organ the former on account of the danger of a Jarisch-Herxheimer reaction, and the latter because of the possibility of softening or degeneration. Ehrlich has repeatedly warned against the use of the drug in patients with coincident infection such as influenza, tonsillitis, enteritis, etc.

Schlossberg, Morel, Mouriquand and Policard, Schreiber and Hoffmann and many others have shown that the drug is not a renal irritant. Wechselsmann says that nephritis is no contra-indication.

Epiothelioma-Like Ulceration Healed by Extract of Alder.—Naborro and Higgins (Brit. Jour. of Surgery). The base of the ulcer was covered by vascular granulations, but no "apple-jelly" nodules were seen. It was scraped and cauterized with acid nitrate of mercury, and subsequently exposed to X-rays for several weeks. Little, if any, improvement was observed. Consequently permission was obtained to try the effect of extract of the common alder, which was introduced a few years ago by Gray for the treatment of malignant disease. The reason for this step was that

sections from the scrapings showed a papilliform arrangement and characteristic "cell-nests." An occasional giant cell was seen, but no mitotic division of the cells. Expert pathological opinion was somewhat divided between a proliferating papilloma, a squamous-celled epithelioma, or a tuberculosis verrucosa cutis. No inoculation tests are recorded. Half a minim of the extract was given in water three times a day and this was gradually increased until the girl was having half a drachm three times daily. Within a fortnight of taking the alder the ulcer was entirely healed, the area being covered with epithelium, and it has remained well ever since. It certainly seems as though the drug expedited the cure, though whether the late effects of the X-rays had some effect in this direction must also be taken into consideration.

Novel Treatment for Ringworm: Iodine and Freezing.—Foley in the London Lancet, is described as follows:

The part, having first been washed with a strong solution of sodium bicarbonate, is next swabbed with a piece of lint moistened with spirit of ether—to remove any grease. When dry, it is painted with tincture of iodine and immediately after an ethyl-chloride spray is applied. The author finds it best to work with a pair of ethyl-chloride tubes in each hand, as he thus covers a larger area in quicker time. The deeper the disease-process penetrates, the longer the spray must be applied. He continues spraying until the integument becomes china-white.

It will be found that in from twenty-four to forty-eight hours the patch of ringworm has become quiescent. Next, little tiny spots should be looked for and these treated in a similar manner. They also will disappear in from a few days to a week. In ringworm of the scalp, three or four applications of iodine and the spray are required, but on the face or smooth surfaces one application suffices.

Foley declares that by the use of this method he has succeeded in curing in a week cases of ringworm that have persisted for months, and thus far it has never failed.

Report on Two Hundred Cases of Ringworm.—Emrys-Janes (British Medical Journal) considers the X-ray the best treatment for ringworm of the scalp when the disease is well established and extensive. The doctor uses the single dose method; i. e., but one exposure is given to any portion of the infected area unless, for some reason the first exposure has been

incomplete. Nervousness and the patient's inability to keep still, lack of perfectly suitable tubes, and inexact centering of the tubes in the holder are the commonest reasons for having to give a second dose. The doctor has never had an X-ray burn, although ninety-three of the cases were infected over the entire scalp. He uses a twelve-inch coil equipped with a dipper brake and a tachimeter for regulating the number of interruptions. An automatic current switch is used in circuit with this; so that a definite number of interruptions can be given with no danger of accidentally giving an overdose. A Sabouraud pastile is used for the application.

Miscellaneous.

Treatment of Sleeplessness in Cardiac Insufficiency.

In considering this subject, Albert Frankel, says, that disturbance of sleep is observed in all cardiac cases, in all the various phases of the disease and in varying degrees of intensity. The treatment of sleeplessness due to subjective cardiac symptoms is facilitated, in some casual factor for the disease such as lues, the abuse of tobacco, etc., can be discovered. Often, however, in angina pectoris we must treat the patient symptomatically and be satisfied to use rather unreliable remedies. On the other hand, in cases of continuous cardiac dyspnea or where attacks of cardiac asthma occur, we can readily combat the cause, as such symptoms are the result of weakness of the heart muscle and a pathological distribution of blood. Here digitalis is at our command, but for immediate relief Frankel prefers the intravenous administration of strophanthin. The quieting effect of this preparation is not due to any hypnotic power, but can be attributed solely to its digitalis-like action on the heart. The rapidity with which strophanthin, given in this way, affects the heart, brings about immediate relief from the dyspnea, and therefore, rest and sleep. It does this not only in cases of mild cardiac insufficiency, but also in arterial diseases with contracting kidney, where suddenly at night unbearable attacks of asthma occur. In these cases strophanthin brings relief with more certainty than camphor, resection or even morphine. It can be given in spite of hypertension as therapeutic doses of digitalis and strophanthin should, in the author's opinion, be considered as having no effect on the blood pressure. Comparative studies have shown that digitalis per os combats these attacks of dyspnea more effectively if one or sev-

eral strophanthin injections are given just previous to the beginning of the digitalis medication. By giving strophanthin injections in series all medication per os can be dispensed with.

In very serious cardiac lesions with constant dyspnea, as in the final stages, or even when Sheyne Stokes breathing is present, strophanthin may bring about unexpected relief, even after digitalis per os has lost its power and morphine and its derivatives have failed to effect in any way the distress of the patient.

Frankel's experience furthermore leads him to state that while morphine is indispensable in very severe angina pectoris or in moribund cases, it should not be used until strophanthin has been tried intravenously.

In 1913 the author administered strophanthin intravenously 425 times to fifty patients and no injurious or unpleasant effects were noted. It is to be remembered, however, that 0.5 to 0.75 Mg. is the normal dose. If detrimental effects were observed in previous years they were due to the fact that 1 Mg., now considered the maximum dose, was stated to be the proper amount for injection. Since the present dosage has been decided upon, the intravenous administration of strophanthin may be considered as being as harmless as any form of therapy, capable of producing such pronounced effects.—Therapie der Gegenwart.

Autoserotherapy in Anaphylactic Shock.

Widal, Abrami, and Brissaud studied the conditions under which anaphylactic shock might be made to serve a useful purpose in therapeutics. The increased coagulability of the blood which is one of the manifestations of anaphylaxis may be utilized in the treatment of such conditions as hemophilia. But this increased coagulability is not peculiar to anaphylaxis. It occurs as the result of inoculating a person with his own blood-serum, obtained after allowing a small amount of his blood to coagulate at the temperature of the laboratory. This inoculation is not followed by any untoward symptoms, not even by an urticaria. Moreover it has been found that this autoserotherapy serves to counteract the symptoms of anaphylactic shock such as fever, collapse, and urticaria. The method has also been employed favorably in the treatment of three cases of paroxysmal hemoglobinuria that resulted from surface chilling. Martin and Darre found that by injecting infants with .2 c. c. of their own serum they could in one-third of the cases control the unfavorable manifestations of anaphylaxis.—Le Bulletin Medical.

Aminoaciduria and Hepatic Insufficiency.

Marcel Labbe and Henri Bith note that as the result of the study of twenty-seven patients affected with various diseases of the liver they have concluded that the exaggerated excretion of amino-acids is the result of anatomical lesions of the liver or functional alterations of its cells. They find, moreover, that the administration of peptone in these cases is an effective means of evoking the excretion of the amino-acids.—*Revue de Medecine*.

Congenital Heart Disease; Probably Pulmonary Stenosis With Incomplete Ventricular Septum.

Wynter reports the case of a man aged 26 who suffered from pains in both elbows and knees at the end of September, 1913, this being the only occasion on which he could recall anything of the nature of a rheumatic attack. On account of the loud cardiac murmur he was kept in bed for several weeks, and finally sent to the hospital. The apex beat was just within the nipple line, and pulsation, with dullness on percussion, extended one inch to the right of the sternum. A loud systolic murmur could be heard over the precordia, the point of maximum intensity being in the fourth space near the sternum. It was so loud that it could be heard for some distance radiating from this point, but was best conducted toward the left clavicle in the course of the pulmonary artery. The second sounds were distinct, but not increased, and there was no diastolic collapsing, and regular. Blood-pressure 170 mm. of mercury. There was no enlargement of the liver, no edema, nor any cyanosis, except during rare attacks of cardiac disturbance, and there was no clubbing of the digits. The patient had always suffered from shortness of breath on exertion; was never able to play games, and could not perform any arduous work. Blood count: Red cells, 6,512,000; white cells, 6,400; hemoglobin, 100 per cent.; index, .08. The X-ray screen disclosed an enlargement of the right ventricle and a limited bulging of the conus arteriosus to the left.—*Proceedings of the Royal Society of Medicine*.

Urotopine in the Cerebro-Spinal Fluid.

Zimmermann *Zeits. für Ohrenheilk. und für d. Krank. d. Luftwege*, Bd. 69, considers that Urotopine has been proved to have antiseptic powers. He also regards it as established that the disinfectant action of hexamethylenetetramin is due to its power of releasing formaldehyde under certain conditions. He has administered Urotro-

pine to patients and, after an interval, withdrawn cerebro-spinal fluid by lumbar puncture. In no case has he been able to find free formaldehyde present. From other experiments he finds that Urotopine, even when concentrated, does not inhibit bacterial growth when dissolved in normal body fluids. In inflammatory fluids containing products of protein disintegration such as lactic acid and cholin, formaldehyde is split off from Urotopine. The nascent formaldehyde easily combines with other substances present in such fluids; it may, therefore, not be found on testing for it, even though it has been present. The author considers that this liability to form combinations with other organic substances present in fluids diminishes the bactericidal action of formaldehyde and, as a consequence, of hexamethylenetetramin also.—*British Medical Journal*, May 16th, 1914.

Sarcoma of the Nasopharynx Treated by Radium Emanations.

Tilley (*Jour. of Laryngology*) reports the case of a male, aged twenty-two, who first noticed a "blocking of the nose" four months ago. There was no headache nor any pain in or around the nose. An operation for the removal of enlarged glands in the right side of the neck was carried out in a military hospital in September. The author first saw the patient on October 28, and noted the following points: Patient was very pale, and his voice was that of a young man with complete nasal obstruction. The soft palate was pushed forward into the mouth, and was almost vertical in position. Behind and reaching just below its free margin a large tumor could be seen, which completely filled the nasopharynx, and the lower rounded border of the mass presented a grayish-white ulcerating surface, from which, when manipulated, blood oozed freely. A small portion of the growth was removed for histological examination. Digital examination of the growth proved that the tumor had a broad base which occupied the whole posterior wall of the nasopharynx, the only free portions being its lower rounded surface and that which was in contact with the soft palate. A large, soft, painless, ill-defined glandular mass was present under the left ramus of jaw. Two "emanation" capsules each containing the equivalent of 40 mgrm. of radium bromide were inserted through the anterior surface of the growth about one inch apart and left in situ for twenty-four hours. The patient returned for examination in a week, when the whole mass had entirely disappeared. The appearance of the nasopharynx was as if a large adenoid mass

had been removed a few days previously. On November 25 the patient expressed himself as feeling quite well; all signs of the growth have disappeared, and only a small gland can be detected under the left ramus of the jaw.—*The Australasian Med. Gaz.*

Results of Treatment of Rectal Cancer.

Hartmann states that the records from eighteen surgical clinics, including his own, show with the low operative technic an immediate mortality of 15.8 per cent. in 1,665 operative cases of rectal cancer; 68 per cent. of the survivors succumbed to recurrence in a few years. This shows that 84 per cent. of the patients with rectal cancer operated on by the direct technic are destined to die within a comparatively short period. The outcome is decidedly better when the low technic was supplemented by a laparotomy, the immediate mortality in 260 cases being only 37 per cent. and the later mortality only 18 per cent. The aim should be, therefore, to perfect the technic for the combined operation, and Hartmann gives a number of suggestions, advising the laparotomy as the first step and closing with colostomy, excluding from the operation patients over 60, the obese, and those with defective kidneys, and removing with the cancer all the linked lymphatics.—*Journal de Chirurgie, Paris.*

Diverticulitis and Sigmoiditis.

Dahl reports a case in detail and discusses the history of these affections and the complications which they may entail. He says that diverticuli are usually multiple; up to 400 were encountered in one case. They are more common in men, and after the age of 40. The youngest case on record was in a child of 7. Their development is favored by corpulence, by much loss of flesh after being corpulent, by meteorism, by great fluctuations in the blood supply, and by congenitally weak muscles. The complications may present various pictures according as the lesion induces inflammation around, with or without perforation and peritonitis, adhesion with neighboring organs, the bladder or genital organs, with torsion of the intestine or fistula. Cancerous degeneration has been reported in 8 cases on record (Hochenegg and Mayo).—*Hygiea, Stockholm.*

An Unusual Condition of the Appendices Epiloicæ of the Pelvic Colon.

Greaves reports, whilst exploring the rest of the abdomen in a woman 68 with gall-stone obstruction just above the ileocecal valve, finding two hard nodules in the pel-

vic colon. The nodules were hard, were beneath the serous coat, and blackish in color. On incision a hard fecal concretion of the size of a large pea was obtained, but no communication with the bowel could be made out. Author explains that fecal matter could find its way into such a hernial protrusion and becoming dessicated would form a concretion. Owing to the peristaltic movements of the intestine and the presence of the concretion, the narrow neck of the hernial protrusion might tend to become a pedicle and ultimately get completely shut off from the lumen of the intestine.—*British Medical Journal.*

Case of Acute Cerebellar Ataxia in an Adult.

Buzzard, reports the case of a woman, aged 38, who gives the following history: When in good health in September, 1910, on a certain day she was seized with shivering and general malaise. This continued until the following Tuesday morning, when she woke up to find herself hardly able to speak, and quite unable to use her arms or legs properly. From that time until the present there has been gradual but slow improvement, so that she is more able to talk clearly and able to use her hands for most purposes. At the same time she is still unable to stand or walk without some support. Present condition: The function of the cranial nerves is normally carried out with the exception that she displays a marked amount of ataxic dysarthria. The strength and sensibility of her arms are perfectly good, and she only displays a slight amount of cerebellar incoordination when tested severely. The lower extremities are powerful enough, but widely ataxic when she attempts to walk. There appears to be very little impairment of sense of position. There are no nystagmus, no ophthalmoscopic abnormalities, and no organic changes in the reflexes. The patient complains of no giddiness or tinnitus.—*Proceedings of the Royal Society of Medicine.*

Glioma of the Cerebellum; Recovery After Simple Drainage of Cyst.

Batten reports the case of a girl, aged 8 years, who in November, 1911, complained of headache, attacks of vomiting, and unsteady gait, which she had had for two months. On examination she had double optic neuritis and symptoms pointing to a tumor of the cerebellum, the ataxia being rather more marked on the right than the left side. A subtentorial decompression was performed on November 14 and a cyst containing a yellow fluid, which rapidly clotted, was found in the left lateral lobe. The wall of the cyst was formed of a new

growth which infiltrated the lobe of the cerebellum. A small piece of the growth was removed and on microscopical examination showed the appearance of a glioma. The child slowly recovered, and now, two years later, seems quite well.—Proceedings of the Royal Society of Medicine.

Case of Osteitis Deformans.

Myers reports the case of a man, aged 57, who came to the Western General Dispensary about a year ago for advice with regard to severe pains in the back and legs. It appeared that he had suffered from pains in various bones and joints for five years. The infected bones included the vertebrae, both femora, especially the left, both tibiae and fibulae, the right radius and ulna, and the skull. The walk of the patient was suggestive of osteitis deformans. He had lost about four or five inches in height since his pains began. The head was bent forward, evidently on account of the usual dorsocervical kyphosis of this complaint. There was very distinct thickening of the left femur, which also showed an outward and a forward curve. There was some thickening of the left tibia and perhaps the right radius and ulna. The clavicles seemed to be a little enlarged also. The peculiar feature of the case was the apparent want of increase in thickness of the cranial bones. The patient could wear the same hard hats now as formerly. He had arteriosclerosis rather well marked. Pains in the precordial region troubled him occasionally. The appetite was good, the bowels were open daily, the speech was "stuttery" at times, the memory fair, and he slept well. There was no similar case in his family. The urine was normal. The calcium content of his blood was estimated upon two occasions, and each time it was less than normal. The Wassermann test was negative. The diagnosis of osteitis deformans was backed up by the X-ray photographs, the only difficulty being his skull and a rather prominent lower jaw. The latter suggested the possibility of the co-existence of Paget's disease with acromegaly, but an X-ray picture showed a normal sella turcica and nothing abnormal in the inferior maxilla. With regard to treatment, he had taken quinine, iodide of potassium, and nux vomica with no noticeable benefit. For the pain various liniments had been tried, and perhaps had been of some use, but the greatest relief from pain had been obtained from salicylate of sodium, which the patient was still taking in conjunction with tonics.—Proceedings of the Royal Society of Medicine.

Melubrin.

Melubrin is the sodium salt of a combination of amidomethane sulphonic acid with antipyrin, and possesses chemical properties which suggest better therapeutic results than those obtained from other antipyrin combinations or substitutes. Several authors record their favorable experience of this drug in rheumatism, sciatica, various infective processes, including tuberculosis, and in reducing the lightning pains of tabes dorsalis. Hahn further found that a distinct advantage over other salicylate preparations was that Melubrin could be given intravenously without any untoward symptoms being produced. R. Riedel, (Muench Med. Woch., November 4, 1913) has given this substance by the mouth, and by various methods of injection, and has only once seen the slightest toxic symptoms; these, however, were of short duration. In one case of acute rheumatism, the pain and swelling disappeared after a single intravenous injection of 0.75 gram. But as a rule, much larger and repeated doses are required to attain this effect. He has made the observation that the therapeutic effect is just as good after subcutaneous or intramuscular injections, and now strongly recommends this method as being simpler and less tedious than the intravenous method. He gives from 2 to 3 grams twice or three times daily. He finds it useful also as an antipyretic and antineuralgic. In conclusion, he points out that powder and not tablets must be used for preparing solutions for injection, as the latter contains some starch.—British Medical Journal.

Recent Research in Psoriasis.

Under this heading there appeared in the February number of this journal a resume of observations made by Schamberg and others. Tidy (Brit. Journ. Dermat.) while acknowledging the care and labor expended on their valuable and interesting analyses, criticises their conclusions. He divides his remarks into three heads: (1) Are the results obtained peculiar to psoriasis? In reply he is of the opinion that the retention of nitrogen found by the authors referred to is not peculiar to that disease. On the contrary, the "retention" occurs in all conditions in which the skin is widely affected by inflammatory or proliferative processes. Of such, one may take as an example pemphigus foliaceus. (2) What is the explanation of the apparent retention of nitrogen? If stored up in the substance of the skin, great increase in its thickness must have been noticeable, yet this did not happen. It is most improbable that there

could be some abnormal form of excretion apart from the skin. Tidy believes that the observed retention of nitrogen is apparent and not real, and is accounted for by loss from the affected skin. (3) Does the retention of nitrogen continue in cases of psoriasis after scaling has ceased? Since it is extremely difficult to establish nitrogenous equilibrium in man, it is impossible to draw conclusions from small retentions of nitrogen, and the inference is legitimate that there is no evidence of retention of nitrogen in psoriasis after the disappearance of the eruption. On the very low protein diet which the authors employed in some instances, often combined with low caloric value, the metabolism must be influenced by two factors, namely, the presence of psoriasis, and the conditions of partial starvation.—Edinburgh Medical Journal.

Panastase Lilly.

Panastase, Lilly is an active preparation of the pancreatic enzymes. It is made from fresh pancreas and contains all of the enzymes of that organ.

Panastase, Lilly is indicated in impaired starch digestion and pancreatic insufficiency. It is a valuable aid to digestion in convalescence and in wasting diseases including tuberculosis and glycosuria. This highly active digestant is supplied in dry and liquid forms. It is conveniently prescribed in capsules and tablets of three and five grain sizes. Eli Lilly & Company will be pleased to supply literature and samples. Address the home office at Indianapolis.

The various maladies resulting from more or less tardy alimentary conditions, can be promptly and thoroughly relieved by the judicious use of Pil. Cascara Comp.-Robbins. Made in two strengths. Mild 1 gr. Strong 4 grs.; you can easily regulate the dose to suit each patient. For this purpose these pills are par excellence the remedy.

Under Nourished Children.

As an upbuilder in under nourished children, cod liver oil has always held the highest rank. Its distinct power as a tissue builder has served the profession in good stead when treating run down children, but unfortunately, owing to the unpleasant taste of the plain oil and even of emulsions, great difficulty was experienced in the administration of cod liver oil until pharmaceutical science hit upon pleasant yet effective means of giving the oil.

Thus in Cord. Ext. Ol. Morrhuæ Comp. (Hagee) the physician has at his disposal a cod liver oil preparation which will serve

efficiently as a tissue builder, and which is especially adapted for use in children by reason of its very palatable nature. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) should be used whenever the oil is indicated.

A Mouth Wash in Fever Cases.

In all fever cases where the tongue is coated, the lips dry and cracked and the teeth covered with sordes, the use of some cooling and soothing mouth wash would seem to be indicated.

Glyco-Thymoline in a 25 per cent. solution with cold water fills this want perfectly. Its frequent use is grateful to the patient and at the same time a great factor in relieving the condition.

In re-Pil. Cascara Comp. Robbins, Mild and Strong, see page x they contain no strychnia to poison, no Belladonna to dry the secretions or abnormally dilate the pupils—nothing to injure your patients. They are suited to all conditions requiring more or less alimentary stimulation. Given per se or with any other remedial agent. As anti-dyspeptic, aperient, laxative or cathartic they are always pleasant and thorough, and do not leave the alimentary tract in a state of atony. No unpleasant symptoms develop from continued use.

Some Valuable Mechanical Laxatives.

Russian Oil and Agar are among the latest offerings of Parke, Davis & Co. They are mechanical laxatives of a high order of merit and are certain to attract widespread attention from the medical profession.

Russian Oil, P. D. & Co., is a hydrocarbon oil distilled from Russian petroleum, generally known in Europe as paraffin oil. It is tasteless, colorless, odorless, and is guaranteed to be free from sulphur compounds, acids, alkalies and all harmful by-products. Particular stress is laid upon the high specific gravity of Russian Oil, P. D. & Co., and its resultant high viscosity and great lubricating power. The product is not a laxative in the sense of stimulating the bowel by local irritation, its function being rather that of an intestinal lubricant. It passes in toto through the alimentary tract, mingling with the food in the stomach and upper digestive tract, with the result that the feces become thoroughly lubricated and pass through the lower bowel more rapidly and are expelled from the colon promptly and easily. Not the least valuable feature of the product is its protective effect on the stomach and intestine, it being well known that abrasions or irritations of the mucous surfaces permit bacterial infection and general toxemia. If de-

sired the oil may be taken with a pinch of salt or a dash of lemon juice, or it may be floated on a glass of water, wine, milk or other beverage. The dose recommended for adults is two to three tablespoonfuls, morning and night, for the first two or three days. Later the amount may be diminished. Parke, Davis & Co. supply Russian Oil, Aromatic, and Russian Oil, Unflavored. Physicians, when prescribing, should indicate which product is wanted.

Agar, the other preparation referred to, is a Japanese gelatin derived from seaweeds. It is supplied commercially in medicinal use. It freely absorbs water and retains it. It has the additional property of resisting the action of the intestinal bacteria, and of the digestive enzymes as well. Its chief use in medicine is in the treatment of chronic constipation. Experiments have shown that when Agar is eaten as or with a food it passes practically unchanged into the intestine, where it permeates the feces, and, by keeping them uniformly moist, aids peristalsis. Hard and dry fecal masses are reduced to a softer consistency, normal evacuation resulting as a consequence. One or two heaping tablespoonfuls, according to individual requirements, may be taken once a day, preferably in the morning. It may be eaten with milk or cream, or mixed with any cereal breakfast food, with the addition of salt or sugar to make it palatable.

Gala Week at the Thousand Island House.

Flying boat, motor-boat races at Alexandria Bay, N. Y. 1,000 Islands, August 12th, 13th, 14th, 15th, 16th, 17th and 18th under the auspices of the St. Lawrence River Yacht Club.

A \$500 cup for the motor-boat races will be presented by Col. O. G. Staples, Commodore of the Yacht Club and Proprietor of the Thousand Island House.

Prof. Ralph M. Brown, or Mr. Charles Fay, Jr., with a Thomas Flying Boat, the same that carried Mrs. Whitman over New York City, will make two flights daily and will carry passengers.

There will also be running races, swimming contests, motor-boat races of all classes and athletic sports.

This will be one of the biggest race and athletic meets ever pulled off at Alexandria Bay.

Take a few days off and visit the Thousand Islands making the THOUSAND ISLAND HOUSE AT ALEXANDRIA BAY your headquarters.

Hereditary Blue Sclerotics and Brittle Bones.

Cockayne reports the case of a female aged one year and ten months who had

never walked and who had deep blue sclerotics. A skiagram showed an opacity of the bones less than normal. The infant's father had blue sclerotics and broke both legs at the age of sixteen. Recently he broke his femur and several ribs by falling from his bicycle. His sister had blue sclerotics and broke her ankle by slipping off the bottom step of a staircase. These two were smaller than any of their brothers or sisters. The grandfather was a very small man, had blue sclerotics and had frequently broken his bones.—Proceedings of the Royal Society of Medicine.

The Physician and His Business Expenses.

Collie enumerates the following as the more important of the usual business expenses of the practitioner in England: Fees for pathological examinations. Drugs, Surgical instruments and medical books. Subscriptions to medical societies. Salaries or fees of assistants. Postage and telephone rental and calls. Accountancy fees. Wages, including board, of any extra domestic servants rendered necessary by the practice. Workmen's compensation and national health insurances. All carriage and motor expenses, including repairs, renewals (which are not capital additions), licenses and insurances of car and man, also depreciation of car. If the physician has an office separate from his home the whole cost of the former must be deducted before his profits can be arrived at. If the physician carries on his profession wholly or in part at his residence, a proportion of the rent (not exceeding two-thirds) rates, taxes, lighting, heating, and repairs must be debited. The proportion of rent deducted will of course correspond to the value of the portion of the house set aside for professional purposes. Bad debts should be estimated and deducted, and also a percentage for depreciation of furniture, etc., of the office and waiting room. Life insurance premiums may be deducted, provided they do not exceed one-sixth of the income. All of these items, with the exception of the depreciation of the car, are proper deductions to make when preparing one's income tax returns, at any rate in England.—British Medical Journal.

Multiple Lupus Vulgaris Involving Skin and Mucous Membranes.

Pernet reports the case of a boy, aged 15, with a history of two years' duration. There were numerous patches and foci of lupus vulgaris scattered about the face and limbs, especially the legs. The disease had started on the right arm. The palate and nasopharynx were also involved. The boy

was treated with the x-rays, and, in addition, tuberculin injections were given, owing to the involvement of the mucous membranes. The multiple lupus vulgaris lesions did not follow measles or other acute exanthem.—Proceedings of the Royal Society of Medicine.

Method of Demonstrating Occult Fat in Fæces.

Dr. Saathoff, of Obersdorf, advises the following technique for demonstrating and estimating occult fat in fæces. A small portion of fæcal substance is roughly smeared on the slide and slightly condensed over the flame of a Bunsen or spirit lamp. One or two drops of a mixture of glacial acetic acid (90 c. cm.) and absolute alcohol (10 c. c. m.), in which some Sudan II. has been dissolved, are then dropped on the preparation with which it is intimately mixed with the end of a wooden match. When this is carefully done the preparation has the appearance of a fairly thick gruel of a vivid red colour. A thin cover slip is now laid over the preparation, and the slide is warmed and immediately examined under the microscope. The fat shows itself in the form of yellow or red drops which are easily seen, even to the smallest particles, so that it is comparatively easy to make a rough estimate of the amount present in comparison with the rest of the fæcal material. When the slide cools the fat crystallises in needle-shaped crystals of fattyacids which disappear on warming. A normal adult evacuates daily approximately 6 gramme (90 grains) of fat in the fæces, and normal dry fæces contains 20 per cent. of fat. Saathoff has found his method particularly useful in showing an increased evacuation of fat in cases of thyroid disease, hepatic lesions, pancreatic disorders, and diseases of the bowel.—The Hospital, London.

Catgut.

Of the surgeon's armamentarium one of the not least important factors is the material he uses for purposes of ligation, if one traces the progress of surgical art it is interesting to note the variety of different materials that have from time to time been employed to this end.

At the present day two substances hold the field for all buried sutures—viz., silk and catgut—and controversy sometimes waxes high as to the relative advantages and disadvantages of each. Whichever material is selected it is the aim of the surgeon to obtain absolute asepsis combined with strength and pliability. If the ligaturing material is completely absorbed within a reasonable period after its application so

much the better. For this reason catgut is preferred by many. In the past two factors have militated against its general use. In the first place, the difficulty of always obtaining material the asepsis of which is beyond the shadow of a doubt has proved a bar to its employment by many surgeons. In the second place, the usual methods employed for its sterilization have tended to reduce its pliability and tensile power. In addition, many of the processes for the effective sterilization of catgut are complex and tedious; therefore, a simple and reliable method of affecting the same is much to be desired.

Such method is described by Willard Bartlett in Surg., Gyn., and Obst. for May, 1914. Bartlett's method of simple heat sterilization has the advantage of ten years' experience, and inasmuch as it has been employed as a routine procedure at the Mayo clinic in Rochester for more than 63,000 operations during the past nine years it is deserving of more general application.

In brief, Bartlett's process is divided into three definite steps—drying, sterilization, and storage. The ordinary commercial catgut strand is divided into four equal lengths. Each of these is made into the requisite-sized coil, and they are then strung like beads upon a thread for the purpose of easy handling. The string of coils is heated in a dry sterilizer for four successive hours at a temperature of 80 deg., 90 deg., 100 deg., and 110 deg. C. Gauze is interposed between the catgut and metal, and it is important that the heating should not take place in a room which steam enters. In other words, dry heat is essential. Immediately after removal from the sterilizer the material is placed in liquid alboline (Petrolatum liquidum). Here it is allowed to remain until quite "clear." A few hours are usually required for the clearing process, and during this time the gut is separated from the walls of the receptacle by thin paper. When clearing is complete the oil-vessel containing the gut is heated on a sand bath for one hour until 160 deg. C. is reached. This temperature is maintained for a second hour. Sterilization is then complete and the material is stored in a solution of iodine in deodorized methyl alcohol (Columbian spirits). Bartlett varies the proportion of iodine with the diameter of the catgut. Thus, for No. 00 he advises 1 in 700; for No. 0, 1 in 600; for No. 1, 1 in 500; No. 2, 1 in 400; No. 3, 1 in 300; No. 4, 1 in 200, the iodine being taken by weight and the alcohol by volume. In a few hours the catgut is ready for use, and it can remain in an iodine solution indefinitely without deterioration. It is im-

portant that the oil is not removed from the material before it is placed in the storing solution, since catgut which is perfectly free from oil is so sensitive to the action of water that it readily untwists and becomes tangled after it has been in use for a short time.

The method appears to be excellent from all points of view. In the first place it is essentially reliable, both from the standpoint of asepsis and antisepsis. Secondly, gut treated in this way lasts in the tissues somewhat longer than the same sized strand of plain gut when treated by the majority of methods at present in vogue. The material does not deteriorate with age, and its physical qualities appear to be such that, according to Albritt, "a blind man used to the handling of catgut prepared by other methods would not recognize the product at all if it were placed in his sensitive hands."

Finally, the process is essentially cheap not an unimportant detail, since many surgeons prefer to prepare their own ligatures under their direct supervision.—Univ.-Med. Record.

The Influence of Diet on the Growth of Hair.

Several cases of shedding of hair after influenza have confirmed my opinion that diet has much to do with the production and cure of symptomatic alopecia. Hair contains 5 per cent of sulphur, and its ash 20 per cent of silicon and 10 per cent of iron and manganese. Solutions of beef, or rather of part of it, starchy mixtures, and even milk, which constitute the diet of patients with influenza and other fevers, cannot supply these elements, and atrophy at the root and falling of hair result. The color and strength of hair in young mammals is not attained so long as milk is their sole food. As to drugs, iron has prompt influence. The foods which most abundantly contain the above named elements are various albuminoids, and the oat, the ash of that grain yielding 22 per cent of silicon. With care these foods are admissible in the course of febrile diseases, when albumen is the constituent suffering most by the increased metabolism. I have often found a dietary largely composed of oatmeal and brown bread greatly promotes the growth gish capillary circulation.

Those races of men who consume most meat are the most hirsute. Again, it is well known in the Zoological Gardens that carnivorous mammals, birds and serpents, keep their hair, feathers, or cuticle, in bad condition unless fed with whole animals, and the egesta contain the cuticular appendages of their prey in a digested or partly

digested state. It is also an old well-proved fact that a closely restricted diet—cheese, for example—soon produces in dogs a loss of hair.

In treating fevers a long course of non-nitrogenous diet may promote seborrhoea, which is so often a concomitant of the alopecia. When the special nutritive supply is secure, the depressed condition of the vasomotor and trophic nerves proceeding from the cervical ganglia to the scalp may be stimulated by blisters and liniments at the back of the neck. I have always found that friction of the scalp with pomades and lotions, dislodges many hairs which might otherwise remain, and that cold or tepid baths with salt added, and rough rubbing of the rest of the body, will flush the capillaries of the affected parts more effectually. Besides, when pomades are used, frequent washing becomes necessary, and this is conducive to baldness.—Mapother, in The British Medical Journal.

How Governments May Ruin Peoples.

There are no words in which those who love peace and humanity, and who have cherished their faith in the value of the world's best kinds of social progress, can even faintly express their feelings, in view of the great war in which Europe has become involved. It is, therefore, the part of wisdom not to argue or to exclaim overmuch, but use such reason and calm judgment as can be brought into exercise. Days of reckoning will come, and the larger ends of justice will in the long run make their appeal to men and to nations. Plainly, the thing that is more wrong now than anything else in the world is the way in which hundreds of millions of civilized human beings are victimized by imperfections in their own methods and systems of government. No large bodies of men in any European country could have wished for this war, any more than they could have wished to have their own cities or provinces swept by Asiatic cholera or devastated by earthquake, fire, or flood. They have been led into the war by the mismanagement of governments.—From "The Progress of the World," in the American Review of Reviews.

Range of Flight of the House Fly.

Nash, who has devoted much attention to the spread of disease by flies, finds that the common house fly (*Musca domestica*) does not readily leave a house in which it finds protection, warmth and food. Such houses situated near breeding places (as where house refuse is deposited, or horse manure from stables is kept unduly long) suffer from a plague of flies not found in

houses in the next street further away. These nearer houses effect a considerable arrestment of the spread of flies. In these infested houses, although fly-paper may kill hundreds, just as many are found twenty-four hours later if the windows are left open and the weather is warm. Where flies are numerous, they decrease in number, in different houses, in inverse ratio to the distance from the breeding ground. Flies fly farther when places of arrestment, in the shape of houses, are few or far off. Where houses are few, more flies will be found in houses half a mile from the breeding place than where houses are many. Where houses are numerous, few flies will travel more than a quarter of a mile.—The London Lancet.

"Paraldehyd" possesses many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd (see page xiv this issue) which is an elegant preparation.

Acute Non-Gonorrhœal Orchitis and Epididymitis.

Stroink (Deut. Med. Woch.) has investigated four cases of acute orchitis, epididymitis, and funiculitis, by a bacteriological examination of the fluid obtained by exploratory puncture. In every case he obtained pure cultures on various media, and in two cases, when the punctures were repeated, the same organisms were again found. The punctures were made after the acute inflammation had subsided, and the scrotum had been sterilized by washing, and the application of absolute alcohol and ether. The first patient was a lad, aged sixteen, whose scrotum became red and cedematous, and whose right testicle, epididymis and cord became swollen and very tender a day after he had bruised his testicle, while climbing through a window. There was no urethral discharge, the prostate was normal, and the urine clear. When centrifugalized it showed only a few leucocytes. Under the alternate application of ice and hot compresses the temperature fell slowly from 101.3 to 98.6, and the pain and swelling almost ceased. Though the urine was sterile, an exploratory puncture yielded the *Bacillus fluorescens non liquefaciens*. A year later the testicle was much atrophied. The author gives an account of agglutination tests with this bacillus, from which he concludes that it was the cause of the inflammation, but he is not certain as to the portal by which

it reached the testicle. The second patient was a lad, aged fourteen, who had passed a match into his urethra. His left testicle, epididymis, and cord became swollen and tender five days later. The prostate was normal, the urine was clear and sterile, and there was no urethral discharge. Under the alternate application of ice and hot compresses the temperature fell from 102.2 to normal, and the pain and swelling diminished. On the eighth day puncture of the testicle yielded a pure culture of the *staphylococcus pyogenes aureus*. The third patient was a man, aged twenty-two, who developed an acute, painful swelling of the left testicle twelve days after both parotids had become inflamed. There was no urethral discharge; the epididymis, cord, and prostate were normal, and the urine was clear. Puncture of the testicle yielded a pure culture of the *Staphylococcus pyogenes albus*. A rapid recovery was effected with the alternate application of ice and hot compresses. The fourth patient was a lad, aged eighteen, who had previously suffered from attacks of pain in the testicles with fever. He denied having contracted gonorrhœa, or having had a urethral discharge. His prostate and left testicle were swollen and tender, and a slight urethral discharge contained rods and cocci, but no gonococci. Puncture of the testicle yielded pure pus which contained coliform bacilli. These had probably reached the testicle from the bladder or rectum.—British Medical Journal.

A Rare Form of Lichen Ruber Planus.

The ordinary typical eruption of lichen planus and the situations commonly affected are well known to the profession, but in the two cases reported by Polland (Dermat. Zeitschr.,) the typical lesions were associated with pemphigoid bullæ, which, although previously described, are by no means common, and might have given rise to considerable diagnostic difficulty in a less well-informed mind. The bullous lesions in the first case, a woman of twenty-seven, were scattered, but the majority of them were grouped on the legs, especially round the ankles. The itching was very troublesome at times, although it responded fairly well to arsenic internally—the almost specific treatment for lichen planus—and an ointment of a drachm each of camphor, menthol, and chloral hydrate to three ounces each of lanoline and vaseline. The author states that where Fowler's solution completely fails to alleviate, there is every justification, theoretically and in the literature, for the cautious intravenous infusion of salvarsan.—British Medical Journal.



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In febrile conditions, nothing is comparable to Listerine as a mouth wash; two or three drachms to four ounces of water.

'The Inhibitory Action of Listerine' (128 pages) may be had upon application to the manufacturers.

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State Board Examination Questions of New Hampshire.

ANATOMY.

1. Classify joints and give illustration of each.
2. Give origin and complete course of the nerve that has most to do with respiration.
3. How is the heart itself nourished?
4. Give the anatomical relation of the small intestine to the other abdominal viscera.
5. Describe the perineum.
6. Place and describe the nasal bones.
7. Describe the internal jugular vein.
8. What do you understand by the mesentery?
9. Place and describe the thyroid gland.
10. Describe the axillary space and give its contents.

PHYSIOLOGY AND HYGIENE.

1. What is the difference between lymph and serum?
2. What causes an extremity to go to sleep?
3. What is the result of injury to or removal of the semicircular canals?
4. What different vascular conditions may lead to a paling of the face?
5. What changes are produced in milk by boiling?
6. What is the function of the pancreas?
7. Describe locomotor ataxia.
8. (a) Upon what does the clotting of blood depend? (b) What is the cause of this conversion?
9. (a) What do you consider the best method of heating a dwelling, and (b) give the reasons for your answer?
10. What is the best method of ventilating the plumbing system?

MATERIA MEDICA, THERAPEUTICS, AND THE PRACTICE OF MEDICINE.

1. Describe angioneurotic edema.
2. Name the principal causes of pleuritis.
3. Outline the treatment of pneumonia.
4. Define bronchopneumonia and give its etiology.
5. Give a clinical description of pericarditis with effusion and name some of the diseases with which it is associated.
6. Give the physical signs of exophthalmic goiter and discuss its treatment.
7. Name the principal causes of chronic nephritis.
8. Describe diabetes mellitus, name its complications and discuss its treatment.
9. Describe tetany and give its etiology.
10. Name the exanthematous diseases and give the period of incubation of each.

CHEMISTRY.

1. What is a chemical salt?
2. How is nitroglycerin prepared?

3. From what is phenacetine derived?
4. What are the chemical properties of radium?
5. In what is phosphorus the most readily soluble?
6. Urine sediments are how classified? Give example.
7. What are enzymes? Give some of their chemical characteristics.
8. Name an efflorescent salt, a deliquescent salt, a hygroscopic liquid.
9. Where is sulphur found in the body, and under what form? What is its function?
10. In a systematic examination of stomach contents, what are the physical properties and normal constituents?

PATHOLOGY AND DIAGNOSIS.

1. What is the effect on the circulation of increased pericardial pressure?
2. Describe the changes produced in the lungs by mitral stenosis, and how these changes are produced.
3. In what way may arterial disease affect the nutrition of a part?
4. What conditions would influence you in determining the malignancy of a tumor?
5. What organ is most commonly affected in visceral syphilis and describe the lesion found in it?
6. Differentiate diagnosis between obstruction in common and cystic biliary ducts.
7. Differentiate between lobar pneumonia and pleurisy with effusion.
8. Symptoms of incipient tuberculosis.
9. Symptoms (a) of aortic regurgitation; (b) mitral regurgitation; (c) mitral stenosis.

OBSTETRICS.

1. Name and describe the ligaments of the uterus.
2. How and when will you use ergot in obstetrical practice?
3. Give indications for the use of hot vaginal douche.
4. Differentiate fibroid, pregnancy, ascites.
5. Mention three causes for retention of the placenta. Give treatment.
6. Discuss intrauterine irrigation following complete abortion.
7. What points should govern the duration of the lying-in period?
8. Diagnose the death of the fetus during the early months.
9. Describe the second stage of labor.
10. Under what conditions do we most often find failure of uterine contraction?

SURGERY.

1. Enumerate suture materials in general use, and give special value of each.

The Mechanical Treatment of Chronic Constipation

according to latest authorities is accomplished with the most satisfactory results by the use of the mineral oils. Obviously these vary greatly and extreme care must be exercised in their selection. Fortunately in

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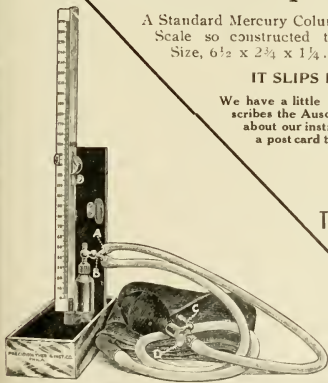
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9. Give symptoms of bowel obstruction and outline a surgical operation in the treatment of the same.
10. Describe the usual deformity in fracture of the neck of the femur and outline method of treatment.

Appendicular Organotherapy.

Savini (Compt. Rend. Soc. de Biol.) refers to the current teaching that the vermiform appendix is a rudimentary, useless, and dangerous organ which ought to be removed in every case of laparotomy. Against such a view it always seemed strange that an atrophying or disappearing organ should present such a well-marked anatomical structure and so varied and abundant a pathology, points which do not occur in truly rudimentary organs. Reference is made further to the researches of R. Robinson (1907 and 1913) on the mechanism of the closure of the appendix, and its physiology; Robinson showed experimentally that the appendix is an independent and useful organ, endowed with some digestive power on albuminoids, and to a less extent on carbo-hydrates, but especially remarkable in that it secretes an acid liquid which plays the part of a hormone that stimulates the cecum and provokes contractions of its muscle. The appendix, then, has a quite definite and useful function. Savini has experimented on a large number of normal individuals in order to study the effect of this organotherapy of the appendix, taken by the mouth. His results are as follows: A small dose of the dry powder of the appendix (about one-quarter of a gram) gives rise, after an interval of from fifteen to thirty minutes, to abdominal gurglings which may continue for about thirty minutes; about an hour later a rather abundant stool, of average consistency, is expelled; Savini has never seen any colic or diarrhoea produced by this treatment; a repetition of the same dose at intervals gives the same effect each time. The minimum active dose is one of about 10 centigrams; but sometimes one must give a larger dose than the average one

of a quarter of a gram. Savini has for some time tried this therapy in cases of chronic constipation, with or without cæcal stasis, in muco-membranous colitis, chronic appendicitis, and after appendicectomy. But, although his results have been favorable, he reserves his full conclusions for a future paper, as he has not yet made a large enough number of clinical observations on the subject. But he says that his experiences agree with those of Robinson, and enable us to conclude that appendicular organotherapy has a remarkable excitomotor effect on the large intestine. It has, in short, the same kind of effect on that segment of the intestine as the duodenal secretion exerts on the pancreas, liver, and glands of the intestine. Further study of the physiology of the vermiform appendix is needed. As the pathogeny of constipation is manifold, one may, says Savini, entertain the possibility of the existence of a chronic constipation due to appendicular insufficiency.—British Medical Journal.

Massage in Gynecology.

Delassus (Jour. Des. Sci. Med. de Lille) says that gynecological massage is a branch of kinesotherapy; movements may be active and passive. They are pressure, friction, tapotement, and vibrations, all executed lightly so as not to cause pain. It is used in two different conditions, for congestions and for anemia of the organs. For uterine inactivity and ovarian insufficiency causing amenorrhœa, manipulations that cause congestion are used. The author has used massage mainly to relieve congestion with menorrhagia. The patient is placed on the back on a gynecological chair, with the legs flexed as for treatment. The clothing is loosened about the abdomen; a small pillow is placed under the sacrum. One finger of the left hand is introduced into the vagina, supporting the uterus as the right hand outside the abdomen manipulates the uterus. The right hand glides over the abdomen in a circle of 3 to 4 centimeters in diameter, which should produce no pain. If painful it will do no good and should be discontinued. Commence the movements at a distance from the lesion; for the ovary giving effleurage in the umbilical region, away from the navel. It is hard to make the patient believe that these slight movements will have so marked a curative effect. Deep abdominal massage demands more force. The great difficulty is to conquer the reflex resistance of the muscles. The internal hand presses lightly the vaginal wall, perivaginal, perimetrium and the base of the broad ligaments, gliding lightly

over them, with movements from below upward and from the center outward, as if to empty the veins. In chronic, painful diseases much patience must be exercised. The resistance of the abdominal muscles must be overcome by distracting the attention of the patient. Indications for massage are in married women who have had several children, and who have become nervous and irritable, with painful menses, and tenderness of all the genital organs due to congestion. The first result is a sensation of lightness, less pain, less constipation, less tenderness to pressure; the uterus becomes smaller, more mobile, and exual intercourse is more pleasant. It relieves edema of the tissues. Metritis may be treated in this manner. Displacements may also be treated in this way. Contraindications are acute conditions.

Duties of the Reserve Physician in Case of Mobilization, Le Progres Med. Every physician has an order of mobilization indicating his assignment. He must inform himself of the departure of trains, personally supervise the loading of his baggage and equipment, secure passage in the compartment to which his rank entitles him, or, if such compartments are full, take any other place available. According to rank, from three trunks down to half of a trunk are allowed. These are supplied by the government and measure 65x22x38 c. m. and weigh, empty, 7.6 to 7.8 kilos. When packed, they must not exceed 17 kilos except that a slight excess is allowed for majors of the second class entitled to two trunks. This corresponds to the following outfit for a trunk: 1 pair of trousers, 1 tunic, 1 pair of shoes, 4 pairs of socks, 3 sets of underwear and shirts, 1 police helmet, 6 handkerchiefs, 6 collars, 3 towels, 2 wash cloths, 1 cup, 1 tooth brush, clothes brush, etc. Table utensils are supplied in cases for parties of six. The uniform, etc., are prescribed and officers of sufficient rank are furnished with a horse and equipment, the last not to exceed 150 francs. Among the requirements are an identification card on a cord. Physicians report first to the commandant of the place indicated, then to the chief medical officer of their assignment. At the place of mobilization, the physician draws his indemnity of enlistment amounting to 700 to 1,500 francs according to rank. The pay for an aide-major of the second class (corresponding somewhat to our rank of captain on the medical staff) is 6.70 francs a day. Half of this can be assigned to a wife, parent or child, a quarter to another person. During the period of concentration, the physician learns the

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duties of his office, familiarizes himself with the assistants, etc.

Pathologic Changes of the Thyroid in Disease.

The object of the author's paper is to point out those diseases and toxemias that do and those that do not produce an alteration in the thyroid, to describe the pathologic changes, to compare them with those seen in goiter, and to note when these changes are associated with signs of thyroid excess. The work is based on some 700 thyroid of man and guinea-pigs collected from post-mortem examinations.

The first change the thyroid undergoes as the result of acute toxemia is an alteration in the colloid material. It loses its staining capacity, becomes granular and vacuolated, and finally disappears. During this change the gland is congested, with perhaps intervesicular hemorrhage. The walls of the empty vesicles become plicated, the short or fat epithelial cells lining the vesicles become high cubical, and finally columnar, and greatly increase in number. The plication of the walls and the cell increase go on until the vesicles, as such, are indistinguishable; during the transition the appearance is given of villous processes growing from the walls of the vesicles. When the hyperplasia is complete, the

gland is hypertrophied, but its store of secretion is exhausted. The distinction between the acute and the complete hyperplasia is that in the acute the intervesicular hemorrhage is the most marked feature; the cell and vesicular changes have not progressed as far as that seen in the complete. The length of time that the gland takes to undergo a complete hyperplasia varies with the toxemia and its intensity; the whole change may take place in twenty-four hours. So certain is this hyperplasia that the thyroid taken from any one of these acute infections can be arranged in the order of the duration of the disease as it corresponds to the degree of hyperplasia, allowance being made for the very acute infections which can be noted by the extreme degree of intervesicular extravasation.

Acute toxemia thus causes a cycle of thyroid changes. First there is an acute hyperplasia in which the gland becomes hypertrophied and exhausted; when the toxin is overcome the gland involutes back to normal, but the effect of the toxemia is evident by the diminution of thyroid tissue and the intervesicular fibrosis. In the less acute toxemia the cell hyperplasia is more marked.

There are three characteristic stages in chronic hyperplasia: (1) When the vesicles are of equal size, the colloid being partially absorbed and coarsely granular, and the cells are proliferated; (2) when the vesicles are of unequal size and packed with colloid, with cell hyperplasia between them, and (3) when the gland is cirrhotic, with deficiency of thyroid tissue.—Farrant, in *The British Medical Journal*.

Antenatal Hygiene, Its Influence Upon Infantile Mortality.

Routh (*Brit. Med. Jour.*) says that we are faced with four well-defined conditions which are reducing the number of infants needed to replenish the population: postponement of marriage; the artificial prevention of fertilization of the ovum by one or both of the potential parents; antenatal mortality; and infantile mortality during the first year of life. As fertility diminishes with advancing age, change in the date of marriage must have an appreciable effect in diminishing the birth rate, and represents, the Registrar-General states, 1.56 per cent. of the total reduction in the birth rate. The extent to which the artificial prevention of maternity is carried in any nationality can can only be roughly estimated by the difference between the past and the present birth rate. The Registrar-General says that if the fertility of married women in propor-

tion to their numbers had been as high in 1911 as in 1876-1880, the legitimate births would have numbered 1,273,698 instead of the 843,505 actually recorded. This means a potential loss to the nation of 430,193 lives in the one year (1911). Adopting the moderate estimate of four abortions to each stillbirth we get a total of 98,680 abortions, premature labors and stillbirths in 1910, and 96,925 in 1911, not very different from the number of deaths of children under one year of age from all causes in the same years—namely, 94,579 in 1910 and 114,600 in 1911. The total live births in 1910 were 896,962, and in 1911 881,138, so that the antenatal deaths were in proportion of one to every nine births, about 11 per cent. in both years, and this is probably far less than the real percentage. The dangers to which the fetus is directly or indirectly liable may be relieved by philanthropic, legislative, and medical means. The first includes assistance by supplying nourishing food and sanitary dwelling rooms and restriction of industrial employment late in pregnancy. The writer advocates also a small weekly pension to be paid after the sixth or seventh month when the woman has voluntarily reported herself pregnant, in addition to the present maternity benefit of 30 shillings now paid after birth. If poor pregnant women could be sent to country homes or sanatoriums during part of their nine months' expectancy, very great good could be done. The writer also urges earlier notification and registration of pregnant women and compulsory registration of stillbirths. The remainder of his paper is devoted to medical and surgical prophylaxis.

Professional Diseases in Reference to Pregnancy.

Vicaelli (*Ann. di ostet. e gin.*) says that various occupations react injuriously on pregnant women, and may injure the growing fetus. A particular kind of labor creates a particular type of individual laborer. Poisoning and intoxications affect the health of the pregnant woman. Bad surroundings militate against healthy children. The weight of the children born in the Institute of Obstetrics of Turin was carefully kept and the conditions and work of the mothers were tabulated. Among these a normal weight has been shown to be 3250 grams, length 50 centimeters. From 1885 to 1912 there were 17,345 deliveries at the Institute; out-patients numbered 22,440; and 7108 other women were assisted, a total of 46,893. The author tabulates 4408 cases who worked in industrial establishments and so were suitable for his researches. The women were Piedmontese, larger and heavier than

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those in other parts of Italy, and the average weight of the fetus was 3400 to 3700 grams; the height, 53.54 centimeters. Of the 4408 women the average weight of fetus was 2973 grams; the height, 49.80 centimeters for women who worked in trades and were primiparae. Of the children of multiparae the weight was 3132 grams, the height 50.17 centimeters. It would seem that the children of the working classes are physically smaller than normal, and this would indicate a decay of the Italian race due to conditions of labor. Mental and physical degeneration, and liability to disease, and the inability to nurse children all go to show the existence of degeneration. Hygiene should be made better; hours of work should be shortened, and the mother should not be allowed to work during late pregnancy. It is found that women work under more unhygienic conditions than men, because the latter are better organized and

demand more. The author now goes over separately the various industries in which women engage. Agricultural work is not unhygienic but it is very hard work and may result in deformities of the pelvis and back. It causes disease of the genital organs, and increase in frequency of abortion, and premature labor. Industries which include work in metals are as injurious as any. They cause poisoning by lead, arsenic, antimony, and mercury, all of which are very unfavorable to the pregnant mother and produce deficient children. Menorrhagia and abortion are caused by chronic mercury poisoning. Phosphorus poisoning causes interruption of pregnancy and uterine hemorrhage. Lead causes uterine hemorrhages, abortion, early infantile mortality, congenital monstrosities, idiocy, imbecility and epilepsy in the children that live.

Benzol in the Treatment of Splenic Leukaemia.

Dupot and Hallez (*Echo med. du Nord*), after reviewing the literature of the treatment by benzol of "leucemie myelogene," and relating in detail a case in which any good effect was very doubtful, conclude nevertheless that the drug must retain a place with other methods in the treatment of the disease. Marked amelioration of the symptoms sometimes follows the exhibition of the drug, and it seems occasionally to prolong and improve radium-therapy. A reduction in the size of the spleen seems an undoubted result in many instances. The treatment by benzol has the advantages of being simple, applicable to all cases, and without serious dangers or by-effects, if we except the indigestion and gastric intolerance which occasionally occur. It is best administered in small doses frequently repeated, and never on an empty stomach. Keratin-coated capsules are perhaps the best form in which to give benzol.—*British Medical Journal*.

Veronal in Nervous Palpitation.

A troublesome symptom, which is prominent in many nervous individuals and inhibits their desire for work and pleasure, is palpitation. If the usual therapeutic and dietetic measures do not relieve this symptom, Kegler suggests that veronal be tried. Ten grains taken before retiring, produces in an adult man the sound sleep, which most neurasthenics do not get as a rule, and quiets the cardiac irritability. Veronal-sodium also proved to be efficacious in Kogler's hands. Seven and one-half grains at night was sufficient to induce sleep in men and to gradually bring about an allayment of the agitated heart action. Patients who took $7\frac{1}{2}$ to 12 grains of veronal regularly at night, never noticed any interference with their capability for work. Kogler did not observe after-effects such as headache, lassitude, or interference with the intellect or gastrointestinal function.—*Medico*.

Large Doses of quinine in Basedow's Disease.

In a severe case of Basedow's disease with rapid emaciation and mild glycosuria, Rene Gaultier gave quinine sulphate 0.35 Gm. (grn. 5-3-4) three times a day with the result that the pulse rate soon decreased and gradually became normal, while increase in weight and strength and disappearance of diarrhea, tremor and cough also occurred. Although the administration of quinine, sometimes as much as 30 grains per day, was kept up for five months, no symptoms of quinine intoxication were produced. This marked tolerance for the

drug, Gaultier also noticed in other cases of Grave's disease, in which quinine had been of great benefit. In literature one may also find numerous instances of the good effects produced by prolonged quinine medication and of extraordinary tolerance for the same. As some of the symptoms of exophthalmic goitre must be attributed to a dilatation of the vessels of the head and neck, one can understand that quinine acts favorably in this condition or account of its vasoconstricting power. In some cases the simultaneous use of the serum of thyroid-ectomized animals seems indicated. Gaultier concludes that prolonged medication with large doses of quinine is to be recommended in Basedow's disease, on account of the frequency with which beneficial results are obtained, the ease of its administration and the marked tolerance, displayed by patients, even when gastrointestinal disturbances are present.—*Bull. gen. de Therap.*

Endothelioma of the Breast.—Robinson (*Proc. Roy. Soc. Med.*) reports a case of endothelioma of the breast, which had remained for years free from recurrence after operation. The tumor removed corresponded to the variety of lymphatic endothelioma, which has been named "perienthelioma" by Lazarus-Barlow. The cell elements are arranged in relation to the lymph-spaces; in some areas the lumen of these is preserved, and the cells are arranged round them; in others, there are large cell masses corresponding to the "endotheliomatous" form. Clinically there is nothing in the history or physical signs to distinguish these cases from what might be met with in an ordinary case of spheroidal-celled carcinoma of the scirrhus type engrafted on or associated with some interstitial mastitis. The macroscopic character of the growth on cutting into it at the time of operation or afterwards are noteworthy; the pink color, granular appearance, the well-defined margin, and the absence of any cupping or section. The axillary glands had the appearance of being invaded by a reddish granular growth. The malignancy of these cases appears to be considerably lower than that of ordinary typical breast carcinoma.

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Jackson's Pericolic Membrane.

Jackson's pericolic membrane is of congenital origin and is non-inflammatory. It occurs in association with abnormal mobility of the proximal colon, due to a failure of fusion of the ascending mesocolon with the posterior parietal peritoneum. The great omentum, from which Jackson's membrane is derived, is the most primitive agent in fixing the proximal colon to the parietes in the right loin. In cases of mobile proximal colon Jackson's membrane may be the principal means of fixing the colon. Unless it causes kinking of the colon a pericolic membrane is therefore rather useful than harmful, and should not be divided. The symptoms and pathologic conditions found in association with Jackson's membrane (apart from mechanical obstruction due to the membrane) are primarily due to stasis in the abnormally mobile proximal colon, which is ill adapted to the upright posture. Surgical treatment should be directed to securing the normal position and fixation of the proximal colon by the operation of colopexy.—Morley, in *The London Lancet*.

Alopecia Areata, Treatment of.

Stimulating and antiparasitic remedies give the best chance of success in this affection, and in early cases there is a fair prospect of arresting the disease. The hair obtains its nutrition from the papilla, and the difficulty of reaching the deeper parts of the hair-follicle by external application must be borne in mind. The best remedies are probably those which keep the skin of the patch in a state of slight permanent irrigation, and this object may be obtained by the daily application of moderately strong irritants, such as tincture of iodine, lactic acid, acetic acid, chrysarobin, sulphur and mercurial ointments. The author has found (1) the B. P. unguentum hydrargyri iodidi rubri (diluted from 4 to 2 per cent.); (2) the unguentum hydrargyri oxidi rubri, with acetum canthararidis, 3j to 3j, and (3) equal parts of sodium chloride and petrolatum—used for the treatment of ringworm—serviceable for their antiseptic and stimulating properties. Blistering fluids may be used in the early stages, and the application of pure phenol, as recommended by Bulkley, has often given the writer good results. Any possible cause of peripheral nervous irritation, such as carious teeth, errors of refraction, or aural defects, should be investigated. Internally iron and strychnine, or the glycerophosphates or phosphoric acid, as recommended by Sabouraud, may be given. In se-

vere cases pilocarpine nitrate injected into the scalp every week or fortnight, in doses of 1-10 to 1-6 grain, sometimes has a beneficial effect. The patient must be kept in a recumbent posture for some time after the injection. The high-frequency current is serviceable in obstinate cases, and the ultraviolet rays, as obtained from the Finsen or Kromayer lamps, are also worth a trial. When other means have failed, epilation doses of X-rays are sometimes followed by a growth of the hair.—Dore, in *The Clinical Journal*, London.

Hemolytic Action of Adrenalin.

Adrenalin has a relatively strong hemolytic action which is not caused by chlore-tone contained in the solution, but is due to a specific action on the adrenalin. This action is probably not dependent on temperature and is transient. With the appearance of hemolysis on mixing adrenalin with defibrinated blood the mixture becomes brownish red. This coloring is due to the fact that the adrenalin acts on hemoglobin when it is freed upon destruction of the blood-corpuscles, and forms methemoglobin. The hemolytic action of adrenalin is much weaker than that of corrosive sublimate after a certain period of time has elapsed, but within this period it is much stronger than that of sublimate.

Addition of adrenalin hydrochloride to an emulsion of rabbit's blood causes a marked hemolysis, and a certain proportion of the blood-corpuscles are dissolved within a few seconds, even in 1:2000 dilution.—Kariya and Tanaka, in *The Journal of Tokyo Medical Association*.

Chronic Intestinal Stasis—"Autointoxication" and Sub-Infection.

Adami bases his lecture on Sir Arbuthnot Lane's views of intestinal stasis. Recapitulates the seventeen symptoms which result from autointoxication of chronic intestinal stasis: (1) Loss of fat. (2) Wasting of both voluntary and involuntary muscles. (3) Alteration in the texture and color of the skin, with pigmentation and offensive perspiration. (4) Subnormal temperature, especially affecting the extremities. There is no abrupt line of separation between this condition and Raynaud's disease, of which it would appear to be a stage. (5) Mental conditions of apathy, stupidity, or misery, which may become exaggerated to a state of melancholia, or even apparent imbecility, which suicidal tendencies. There may be neuralgic symptoms, neuritis, frequent headache, loss of control over the temper. These nervous states due to stasis are a much more fre-

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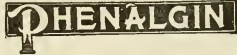
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quent cause of serious crime than is generally imagined. (6) Rheumatic aches and pains in muscles, joints, and skin. (7) Atrophy of the thyroid gland. (8) Either increased or lowered blood pressure. (9) Degenerative changes in the breast, especially in the upper and outer zone of the left breast, predisposing cancer. (10) Prolapse of abdominal organs, partly because of loss of fat, partly because of wasted muscle fibers. Increased mobility of the kidneys, and prolapse and bends of the uterus. (11) Breathlessness on exertion, at times of asthmatic type, due in some cases to distension of the stomach and intestines. (12) Degeneration of the heart muscle with dilation of left heart and aorta and arterio-sclerotic changes (atheromatous) in the systemic arteries. (13) Renal changes which are roughly grouped under the term "Bright's disease." (14) Early loss of hair color with falling out, more common in those with dark than with red hair. (15) Affections of the pancreas with chronic induration, inflammation, and finally cancer. Pancreatic diabetes. (16) Infection of the biliary system, cholecystitis, colicthiasis, cancer, together with many acute and chronic diseases of the liver. (17) Degenerative diseases of the eye.

The indirect changes resulting from the lowered resisting power of the tissues can, says Sir Arbuthnot Lane, hardly be separated abruptly from these more direct changes. Of these the most obvious are: (1) Infection of the gums and pyorrhea alveolaris. (2) Tuberculous infection other than that due to direct inoculation, as through the skin. (3) Rheumatoid arthritis. This, like tuberculosis, is declared not to develop, except in the presence of defective drainage of the gastro-intestinal tract. (4) Infection of the genito-urinary tract, producing nephritis, cystitis, pyelitis, endometritis, salpingitis, etc. (5) Thyroid disorders such as diffuse enlargement, exophthalmic goiter, adenomatous tumors. (6) Still's disease. (7) Pustular infections of the skin. (8) Infection of the large intestine; several varieties of mucous and ulcerative colitis. (9) Ulcerative endocarditis.

The author asks the question, is Sir Arbuthnot Lane justified in his teaching, or is he a victim of obsession?

Auto-intoxication, in short, should and must be banished from the vocabulary of all self-respecting medical men. It is absurd to jumble all these conditions into one common heap; our duty is to recognize and classify each different form—to analyze before we attempt to synthesize.

The Etiology of Intestinal Stasis.—It would have been within the bounds of moderation to call attention to the fact that where stasis exists in certain cases of chronic progressive tuberculosis, the general condition of the patient is so much improved by short-circuiting that a definite arrest of the disease occurs. In like manner it is necessary to point out that conditions such as cholelithiasis, cirrhosis of the liver, pancreatic diabetes, are, like tuberculosis, indirectly caused by conditions other than intestinal stasis.

Granting that by bismuth meals or other means we discover that there is serious delay in the passage of the contents of the alimentary canal, and that accompanying this delay a certain number of the symptoms described by Lane have made their appearance, is this sufficient ground for operation? What is the relative value of these various symptoms as an indication for operation? or, put otherwise, do we know anything definite regarding these symptoms and the way in which they are brought about, and can we utilize that knowledge as a guide in determining our mode of treatment?

In short, while granting freely that Sir Arbuthnot Lane in certain cases has by the removal of a permanently damaged colon given a new lease of life to his patients, converting chronic and progressive invalidism into health and activity, I must at the same time accuse him of false doctrine in his teaching that the colon is merely a "common sink." The danger of this false doctrine is that, encouraged by Sir Arbuthnot Lane's brilliant advocacy, encouraged to regard the colon as of no account, the immature surgeons of two continents will inaugurate an era of short-circuiting, performing this or the yet graver oolecotomy for all sorts and conditions of disease in all sorts and conditions of men, women and children, on the smallest pretext. It is, I hold, too grave a responsibility to assume, this of starting an epidemic of operative surgery purely upon an empirical basis, on a foundation that is not established upon uncontroversial fact. For, to repeat, those who employ this term "auto-intoxication" do not know what they are talking about; they do not know whether the morbid state originates in the small or the large bowel; they see at most that delayed passage in any part of the alimentary tract leads to serious symptoms, but whereas if the hand had offended them they would not cut it off until they had employed the latest and last efforts of conservative surgery, with the colon they would have no such scruples.

The Positive Data Concerning Intestinal

Intoxication.—The truth is that we know painfully little that is precise. Take first the matter of intestinal intoxication—of absorption of deleterious materials developed in the course of intestinal activity. There are, it would seem, three orders of possible toxic substances to be taken into consideration: (1) The products of disintegration of foodstuffs by the digestive juices; (2) the products of disintegration of foodstuffs by bacterial activity; and (3) the ectotoxins discharged by the intestinal bacteria.

Peptones, and more especially primary proteoses introduced directly into the tissues, are directly toxic. The studies upon enteral and parenteral digestion respectively have demonstrated that normally in the passage through the intestinal wall these proteoses are either broken down or built up into harmless substances; it is when they gain entrance directly into the tissues that they are dangerous. Nor can it be urged that where the intestine is inflamed or ulcerated, bodies of this order gain entrance into the blood and lymph, and so set up the symptoms encountered in chronic constipation, because the symptoms of peptone and proteose intoxication are of a totally different type.

We must conclude that in the light of our present knowledge, it is not the digestive fluids that by their action on the foodstuffs induce Lane's symptoms.

The Products of Bacterial Activity upon the Foodstuffs.—With the products of the fermentative and disintegrative activities of the intestinal bacteria the case is somewhat different, but still vague and unsatisfactory. It is well determined that the different bacteria acting upon soluble foodstuffs give rise to different dissociation products, but it cannot be said that the testing of these products, steadily pursued as it has been for the last quarter of a century, has led us very far.

Bacterial Ectotoxins.—It is striking that the intestinal bacilli par excellence—namely, the members of the *B. coli* group—produce no recognizable ectotoxins; the same is true of the other important group of the streptococci. Here once again it is evident that there is singularly little evidence of the development of intoxication proper.

Subinfection Versus Intoxication.—Fourteen years ago I called attention to this matter bringing forward a considerable body of evidence. I showed, both from the studies of others and the investigations of workers in my laboratory, of Ford, Nicholls, and others, that not only do the lymph nodes of the respiratory tract and of the alimentary tract of normal animals



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constantly afford cultures of bacteria, but also that properly prepared organs, such as the liver and kidneys of healthy animals, yield cultures of pathogenic and non-pathogenic bacteria; that, through the agency of leucocytes, bacteria are constantly being carried into the system and as constantly being destroyed in the healthy animal; that with inflammatory conditions in the alimentary canal and greater accumulation of leucocytes in its walls there must be greater passage of these from the surface and more extensive carriage of bacteria into the system. According to the virulence and number of these bacteria so may there be set up other foci of active infection or a condition which I termed "subinfection"—That is to say, the bacteria thus carried in do not multiply and set up foci of suppuration; they are destroyed, but with their destruction the liberation of their toxins causes a poisoning of the cells immediately around them, and the accumulative action of these toxins, whether locally or at a distance, upon the liver cells, for example, brings about the death of certain cells, and replacement by fibrous tissue.

I would not say—that would be absurd—that intoxication by the indol group, for example, plays no part. I would only say that our present knowledge of the phenomena of enteral and parental digestion suggests that the toxic products of protein (including bacterial) disintegration are most effective upon the tissues when they are produced within them, and not upon the outer side of the mucous membrane.

The author concludes with the following:

1. It is more rational to regard the evil effects of intestinal stasis as, in the main, a result of conditions favoring subinfection and low forms of infection than as a result of chronic intoxication.

2. The term "gastro-intestinal auto-intoxication" is pernicious and not to be employed by any self-respecting member of our profession, save for so limited a set of conditions that for ordinary purposes it may safely be wholly expunged from the medical vocabulary.

3. While the symptoms and diseases enumerated by Sir Arbuthnot Lane may follow intestinal stasis, at least a large proportion of them may originate independently of such stasis.

4. Before recommending the operation of short-circuiting, it is necessary, therefore, to make the fullest studies, so as to discover, if possible, the nature of the organism responsible for the disturbance and its probable seat of entry.

5. A discovery of the cause of the

symptoms is calculated to suggest the appropriate means of treatment by means of other than short-circuiting. Only when these have been tried and found wanting is removal or short-circuiting of the colon justifiable.—The British Medical Journal, London.

The Oklahoma State Board of Medical Examiners' Questions.

ANATOMY.

1. What passes through the Foramen Magnum?
2. Give origin and insertion of Sartorius Muscle.
3. Name the parts severed in amputation of the lower third of the thigh.
4. Name the organs in the thoracic cavity.
5. Locate and describe the Popliteal space.
6. How long is the alimentary canal in the adult?
7. Locate and describe the Atlas.
8. Give origin of the gastric artery.
9. How many different bones in the body?
10. Give articulations of the humerus.

BACTERIOLOGY AND PATHOLOGY.

1. Name four modes by which disease is extended and the process of extension.
2. Define Necrosis. Give four causes for same. Illustrate each.
3. What is fatty degeneration? Name three causes for same.
4. What do you understand by Pathological pigmentation? Give three methods by which the same is derived.
5. Define degenerative, exudative and proliferative inflammation.
6. Name three ways by which connective tissue may be derived.
7. Name three pathological results which usually follow the softening of a Thombi.
8. What is tinea tonsurans and its effect on the body?
9. In a suspended tubercular brain, name the parts you would first examine. Why?
10. Give the Pathological change that takes place in the blood of Pellagra patients.

PHYSICAL DIAGNOSIS.

1. What are Rales?
2. Name the varieties of Rales usually met with.
3. What do pulsations at the base and border of the heart indicate?
4. What is a Murmur?
5. How are Murmurs best heard and timed?
6. Name the physical signs of the lung

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cavity.

7. Name the methods of Auscultation.
8. Diagnose Aortic Aneurism.
9. Differentiate Aortic Aneurism from Tumors.
10. Diagnose first, second and third stages of Lobar Pneumonia.

TOXOLOGY AND MEDICAL JURISPRUDENCE.

1. What are the symptoms of acute poisoning from arsenic? Give antidote.
2. The body of a new born baby found dead. How could it be determined whether

child had been born alive or not?

3. What are the symptoms of acute poisoning from bichloride of mercury? Give the antidote.
4. What are the symptoms of acute poisoning from antimony? Give the antidote.
5. What is the maximum dose of morphine sulphate?
6. What is the maximum dose of strychnine sulphate?
7. Give some of the symptoms of traumatic hysteria.

8. Give a definition of melancholia, Mania, katatonia.
 9. Define criminal malpractice. Civil malpractice.

10. If a person should be improperly committed to an insane asylum what legal procedure would be necessary to secure his release?

OBSTETRICS AND HYGIENE.

1. (a) What is the pelvis? (b) False pelvis? (c) True pelvis?

2. What are the straits of the pelvis? Give diameters of each.

3. (a) What is the liquor amnii? (b) How is it useful and what are the dangers of scanty liquor amnii?

4. (a) State the probable cause of face presentation. (b) How would you manage a case?

5. What are the dangers of feeble uterine contractions in the different stages of labor? Give your treatment in each stage.

6. Give two causes for post-partum hemorrhage and describe your treatment in each case.

7. (a) Name three diseases of the mother in which you would not allow the child to nurse the breast. (b) What is Colle's law?

8. At what temperature should a school room be kept?

9. How would you examine a child to determine its physical fitness to enter public school?

10. (a) How would you ventilate a sick room in pneumonia? (b) Would you advise a different temperature of the sick room for a patient?

MATERIA MEDICA AND PRACTICE.

1. What is cresol? Salol? Give uses and action.

2. Give therapeutics of water, hot and cold.

3. Compare the physiological action of aconite and digitalis.

4. Give etiology and diagnosis of cholelithiasis.

5. Diagnose and treat acute appendicitis.

6. Define cretinism. Give treatment.

7. How do tinctures differ from spirits? Give example of each.

8. Name the principal potassium salts and give use of each.

9. What is the difference between irritants and counter irritants?

10. What diseases most commonly occur in the right inguinal region?

GYNECOLOGY.

1. Describe a normal menstruation and state the changes that take place in the uterine mucous membrane.

2. From what must you differentiate an

ovarian cyst?

3. Treat pruritus vulvae.

4. What are the causes of pelvic abscess? Outline treatment?

5. Diagnose cancer of cervix.

6. Define pyosalpinx. Endometritis. Vaginismus. Cystocele.

7. Give the causes and treatment of non-specific vaginitis.

8. Give the causes of sterility.

9. Give the causes of metrorrhagia.

10. Treat ulcer of cervix.

PHYSIOLOGY.

1. Give origin, distribution and function of phrenic nerve.

2. Give origin of the brachial plexus, and give the origin and function of the median nerve.

3. What agents of digestion change starch into sugar?

4. Locate crypts of Lieberkuhn and tell their function.

5. Define digestion.

6. What is the function of the clitoris?

7. What is the function of the white corpuscles of the blood?

8. Give origin, length and termination of cystic duct.

9. What nerve arises in the floor of aqueduct of Sylvius is motor in function and supplies all the muscles of the eye except external rectus, superior oblique and orbicularis alpebrum?

10. Tell where the enlargements of the spinal cord are found and what causes them.

SURGERY.

1. What is a dislocation? Define the various kinds of dislocations.

2. What are the complications of dislocation of the hip?

3. Mention the causes of delayed union and give the treatment.

4. In what portion of the base of the skull may fractures lead to the escape of cerebro-spinal fluid?

5. Give the cause, symptoms and treatment of chilblain.

6. What is hare-lip?

7. How are foreign bodies to be removed from the trachae?

8. Give the technic of a gastro-enterostomy,—any one method.

9. Give the treatment of stone in the common duct.

10. What conditions of the kidneys require nephrectomy?

CHEMISTRY.

1. What is an element? Name an element that is univalent, bivalent, trivalent and quadrivalent.

2. Give the chemical antidote to silver nitrate, also strychnine poisoning.

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3. What is the chemical name and formula for iodoform?

4. What is albumin and give test for albumin in urine.

5. What is the difference between an atom and molecule? Name the lightest element, the heaviest element, the most precious element.

6. What is allotropium? Amorphium? Endmosis?

7. Give the characteristics of (a) Nephritic urine, (b) Cystitis urine.

8. Complete the equation, $2 \text{Na} + \text{O} \rightarrow$

9. Name the chemical changes in the body after death. (Not physical.)

10. What organic acids are present in vegetables and fruits?

The Acquisition of Capital.

Collie points out that it is the duty of every man, even from the time when he commences to practice, to endeavor to save something each year, and as the practice increases this sum, of course, should be larger. Most prudent men who wish to earn an honorable competence and a solid reputation do this. The author strongly urges the physician to go a step further, a step which will make all the difference between that honorable independence which we all hope for, and a hard, unprovided-for old age, which we all dread. The physician should never spend capital. He should never spend the interest of capital. There is no excuse for doing so. It is the provision which he has earmarked, which he is saving for his dependents in the event of his death, and for himself when

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past work. Assuming his income has not declined, he obviously should not require last year's savings or the interest on these savings, for this year's expenses. He saved last year, for he had a surplus. What he then saved is now capital, and the author wants him to look upon all capital and the interest it brings as a thing apart from his ordinary income and expenditure. In this way only can professional men with small incomes and no pension provide for their dependents and for their declining years. Oliver Wendell Holmes said: "Put not your trust in money, but put your money in trust," and a greater than the poet physician said, with arresting impressiveness, 'Whatsoever a man soweth that shall he also reap,' which is as true in the conduct of business as it is in ethics. To save money in general practice is, of course, difficult, but it can be done. The essential success is "a clear and steadfast view of the end."—British Medical Journal.

St. Peter's, Rome, will accommodate 54,000 persons, Milan Cathedral 37,000 persons, and St. Paul's Cathedral, London, 25,000 persons.

A Note on Chronic Intestinal Stasis.

One of the most remarkable facts to light by the radiographic study of the alimentary tract concerns the manner in which the various parts of the digestive system react on each other, so that the discovery of a particular abnormality—say in the duodenum—in a patient enables us to foretell with confidence that we shall, as we continue our investigation of that patient, find certain correlated abnormalities elsewhere. With this extension of our knowledge of the alimentary system has come a new function for radiology. Hitherto the radiologist has been called upon to diagnose isolated lesions, such as a gastric ulcer; now he must show, not only the presence (and the situation) of the gastric ulcer, but also the causes which led to the formation of the ulcer. The author shows the skiagrams of normal conditions. In normal cases the duodenum is small and short (its vertical portion about three inches long, measured ortho-diagraphically). After a few seconds a peristaltic wave is seen to pass along the duodenum, driving the bismuth before it into the third and fourth portions, and on, without delay, into the jejunum, leaving the duodenum empty for the time being. In a few seconds more bismuth is seen to enter the duodenum from the pylorus; this remains for a few seconds in the upper part of the duodenum, and then passes through—propelled

by another duodenal peristaltic wave—into the jejunum. In cases of intestinal stasis the behavior of the duodenum, and its appearance, are entirely different, and in marked cases the phenomena are most striking. I have attempted many times to describe the "writhing" peristalsis seen in these cases, but it is difficult to make the description real to those who have not seen it. The length of the vertical portion of the duodenum (measured ortho-diagraphically) is often as much as five inches (instead of three), and its width double the normal width. It exhibits abnormally powerful peristalsis, and its contents are forced repeatedly down to the lowest part, or even into the fourth part of the duodenum, only to return, over and over again, to the second (vertical) part of the duodenum changes its shape continually, one part of its length after another being seen to protrude; this constitutes the phenomenon of the "writhing" duodenum. The most constant concomitant of duodenal distention is ileal stasis, so much so that if we discover a distended duodenum we may safely predict that we shall find ileal stasis.—The Clinical Journal, London.

Our Present Knowledge of Nephritis.

Modern research has shown that the output of the kidney depends much more upon the biological functional condition of the organ than upon its histology. When first the kidney is injured, it works overtime, so that the quantity of urine is increased. This is followed by exhaustion, when the total amount is small, or even nothing at all, and between these two extremes we have an apparent normal quantity. Many puzzling cases of nephritis can be explained if these points are borne in mind. The pseudo-normal stage can be discovered by the low specific gravity, or by testing the function of the kidney with milk sugar or potassium iodide. Forty grains of lactose are given to the patient, who has abstained from sugar for twenty-four hours, and the urine is tested with Fehling's solution one hour later. A normal person gives a negative result.

In ordinary contracted kidney, the blood vessels suffer most, and are hyper-irritable, hence the polyuria. In chronic parenchymatous nephritis, however, the vessels are involved, but they do not produce the same irritation. During the stage of hyper-irritability, a small dose of a mild diuretic, as potassium citrate, produces copious diuresis, with an increase in the amount of milk sugar and by the increased diuresis after potassium citrate.

From these considerations one can see

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the folly of administering diuretics as a routine in interstitial nephritis, for the kidneys are already over-stimulated, and such measures lead only to exhaustion.—The Canadian Practitioner and Review.

What the Blind May Do.

That the blind may accomplish much we have some memorable examples. All are familiar with the story of John Milton. Then there is that of John Kitto, the eminent Biblical scholar. At the present moment, we have the story and achievements of Jacob Bolotin, the blind doctor.

Dr. Bolotin is the attending physician to the tuberculosis sanitarium at Dunning, Ill. He graduated, at the age of 14, from the College for the Blind, at Jacksonville, Ill. For some years he acted as a traveling agent for some typewriter. Then he took a course of medical studies at Chicago College of Medicine and Surgery, paying his way by selling typewriters.

His sense of touch became so developed that he could name nearly every one of the 600 students at college by shaking hands with them. He passed his examination by dictating his answers to a stenographer. At present he gives lectures on diseases of the heart and lungs to the students in two colleges.

He is a constant reader of the books prepared for the blind. During recent months he has examined nearly four thousand persons for the detection of tuberculosis, and very few discovered that he is blind.

It is within the memory of many to be able to recall the career of Ole Bull, the blind Swedish violinist, and how he traveled the world, and held his audiences spell-bound. He was a marvel.

But one of the greatest achievements of industry in overcoming difficulties is that of Helen Keller, who is both blind and deaf. Under the teaching of Mrs. Macey, she gradually acquired knowledge, and finally secured her degree of B. A., from the University of Harvard. By slow and laborious efforts she was taught a few words, and then the combination of these into simple phrases. After twenty years of toil and study she can now stand upon a public platform and address an audience. She said, a few days ago, I cannot see nor hear your voices, but all comes to me through my hands. In her imagination, the stars shine and she said: "Blindness has its wonders, too, in the imagination."

Her favorite poets, she said, were Shelley, Keats and Whitman. She became a Socialist through reading Morris, Bernard Shaw and H. G. Wells. She thought men could not do without women in politics.

She can understand questions by reading the words through the lips of the speaker, her sense of touch has become so delicate and educated.

All this shows what a marvelous thing the human mind is. Shakespeare had a great conception of this when he made Hamlet say: "There are more things in heaven and earth than are dreamed of in your philosophy, Horatio." And, again, in Hamlet: "In apprehension how like a god."—Canada Lancet.

Intestinal Toxemia, With Special Reference to the Indications for Operative Treatment.

Watson, of Edinburgh, speaks of the pathological basis for intestinal toxemia. States shortly, this consists in the following, in various combinations; the presence of constipation, an associated catarrh of the large bowel, and in aggravated cases the lower end of the small intestine; dilatation of the bowel, more especially the cecum and colon, often associated with visceroptosis; and the presence of adhesions, membranes, pathological kinks, etc., mechanically interfering with normal intestinal movement, with resulting stasis in the large and small bowel.

2. The clinical association of normal intestinal functions, normal stools and the elimination of a normal urine. The author lays comparatively little stress on the presence or absence of indican.

3. Considerable light has been thrown on many gastro-intestinal disorders by the application of the X-rays after a bismuth meal.

4. Clinical conditions induced by intestinal toxemia. The author finds that there are (1) a neurasthenic group; (2) rheumatoid arthritis; and (3) a "dyspeptic" group.

The operative procedures requiring consideration are: (1) the treatment of any adhesions or pathological kinks which may be found on examination; (2) reducing the size of the cecum and anchoring it in situ; (3) short-circuiting; and (4) colectomy.

1. The diseases under consideration are essentially medical conditions, capable of being cured by appropriate treatment if thoroughly carried out in the earlier stages; the question of surgical treatment should therefore seldom arise.

2. There are at present many advanced cases of these diseases in which prolonged medical treatment on the most modern lines produces little or no permanent benefit, and in which benefit may be looked for from appropriate surgical treatment, which effectively reduces the septic absorption from the large bowel. Examination by means of

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the X-rays gives information of very great value in these cases; special attention should be directed, to the cecum, ileum (terminal part), and duodenum, and the results should be studied along with the other clinical findings.

3. The operation of short-circuiting as recommended and performed by Lane is a simple one, but its nature is such as may readily lead to unsatisfactory results in less experienced hands.

4. Before any operation is decided upon on a prolonged course of medical treatment, carried out with great attention to detail, is indicated.

5. When these medical measures have failed to relieve the operation of short-circuiting, possibly combined with colectomy, partial or complete, as recommended by Lane, should be performed.—The Lancet, London.

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 Essayist—Dr. Mary E. Lapham, Highlands, N. C.

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The next annual meeting of the Tri State Medical Association of the Carolina and Virginia will be held on the third Wednesday of next February.

Iodine Applications in Diphtheria.

Iodine ointment was used by the author in 30 cases of diphtheria and 19 of scarlet fever, as well as in 10 other cases of septic throat of varying origin and degree. He employed 3 cotton pledgets, 2 to remove secretions and false membrane and dry the surface as far as possible, and the third, well smeared with the ointment, to be rubbed on the affected surface and the surrounding area. This was done every three hours, or in severe cases every two hours,

until improvement occurred. Under this treatment many cases of diphtheria cleared up within a few hours, becoming quite free from false membrane on the second or third day. The septic cases also promptly recovered, and the scarlet fever cases were unusually free from local complications. The treatment is advantageous, especially in children, in being in no way unpleasant to the patient.—Thomas, in The British Medical Journal.

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October, 1914.

Henry Enos Tuley, M. D., Sec'y.,
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D'Orsay Hecht, M. D. Pres. Chicago, Ill.

SOUTHERN SURGICAL and GYNÆCOLOGICAL ASSOCIATION.

Annual Meeting at Asheville, N. C.
Dec. 15-17, 1914-

W. D. Haggard, M. D., Sec.,
Nashville, Tenn.

John W. Long, M. D., Pres.
Greensboro, N. C.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Richmond, Va.
Nov. 9-12, 1914.

Seale Harris, M. D., Sec.,
Mobile, Ala.

Stuart McGuire, M. D., Pres.
Richmond, Va.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting Feb. 1915.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Edw'd C. Register, M. D., Pres.
Charlotte, N. C.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Birmingham, Ala.;
April 20, 1915.

N. Baker, M. D., Sec.,
Montgomery, Ala.

B. B. Sims, M. D., Pres.,
Talladega, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting at Galveston, Tex.,
November, 1914r

F. H. Clark, M. D., Sec.,
El Reno, Okla.

S. S. Glasscock, M. D.,
Kansas, City, Mo.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Deland, Florida,
May, 14, 1915.

Wm. C. Little, M. D., Sec.,
Jacksonville, Fla.

F. Clifton Moore, M. D., Pres.
Tallahassee, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Macon, Ga.
April, 21-23, 1915.

Wm. C. Lyle, M. D., Sec.
Augusta, Ga.

W. B. Hardman, M. D., Pres.,
Commerce, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Newport, Ky.,
Sept. 23-25 1915.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

W. O. Roberts, M. D., Pres.
Louisville, Ky.

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at Lake Charles, La.
April, 20-22, 1915.

R. DeBuys, M. D., Sec.,

1122 Maison Blanche Bldg. New Orleans,
Geo. S. Bel, M. D., Pres.
New Orleans, La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Hattiesburg, Miss.
May, 11, 1915.

E. F. Howard, M. D., Sec.,
Vicksburg, Miss.

J. S. Ullman, M. D., Pres.
Natchez, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Greensboro, N. C.
June, 16, 1914.

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Sanatorium, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
Oct. 5-7, 1914.

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Secretary.

H. B. Kauffman, Pres. Albuquerque, N. M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Greenwood, S. C.
April, 20-22, 1915.

Edgar A. Hines, M. D., Sec.,
Seneca, S. C.

E. F. Parker, M. D., Pres ,
Charleston, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Nashville, Tenn.
April, 1915.

Olin West, M. D., Sec.,
Nashville, Tenn.

S. M. Miller, M. D., Pres.
Knoxville, Tenn.

MEDICAL SOCIETY OF VIRGINIA

Annual Meeting at Washington, D. C.
Oct. 27-30 1914.

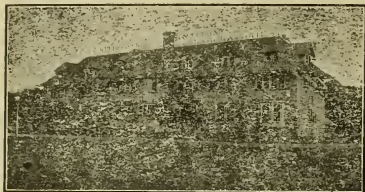
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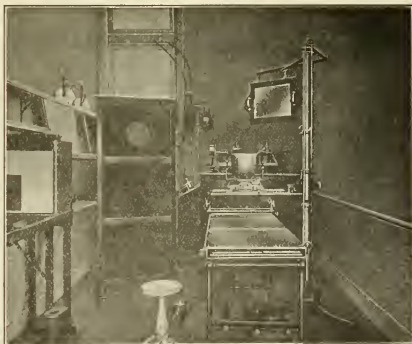
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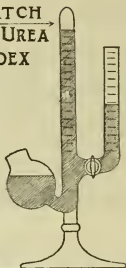
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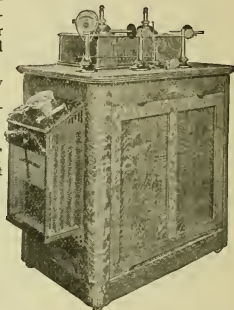
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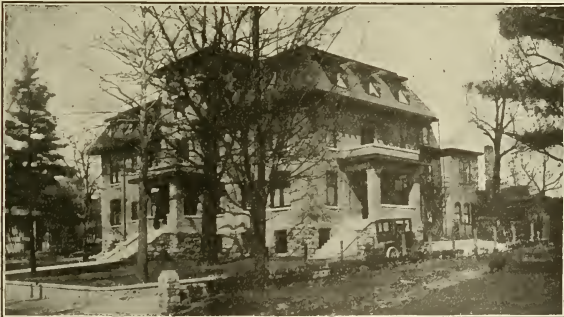
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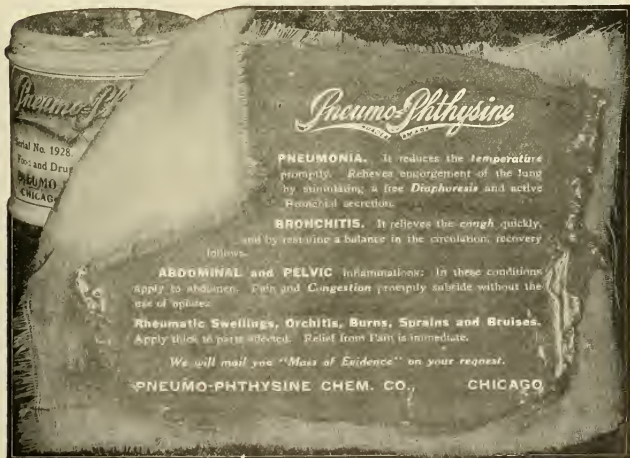
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The Charlotte Medical Journal

VOL. LXX

CHARLOTTE, N. C., OCTOBER, 1914.

No. 4.

Richard Henry Lewis, M. D., LL. D.

Edited by Drs. D. W. and Ernest S. Bulluck,
Wilmington, N. C.

Richard Henry Lewis, M. D., LL. D., Raleigh, N. C., is the only son of Richard Henry Lewis and Martha Elizabeth (Hoskins) Lewis, being the child of a second marriage on the part of both parents. He was born February 18, 1850, at Greenwreath, the Foreman place on the Tar River, eight miles above Greenville in Pitt County. Soon after the death of his father in January, 1857, his mother moved to Tarboro and there he spent his boyhood and early manhood.

His preparatory education was obtained at the Owen School, the Tarboro Male Academy and the well known school of the late R. H. Graves in Granville County. In 1866 he entered the State University, where he was a first honor man in his classes. Upon the closing of the University, as result of political changes in 1868, he went to the University of Virginia to continue his academic training for one year. In 1869 he began the study of medicine in that institution. The following year he entered the University of Maryland and was graduated M. D. on March 1, 1871.

After graduation he was elected assistant and later resident physician of the Baltimore Infirmary or University of Maryland Hospital. Having thus prepared himself he settled in Tarboro as a general practitioner.

He very soon, however, decided to specialize on diseases of the eye and ear. His special training was received in the private office of the late Dr. Chisolm of Baltimore and at the Royal Ophthalmic Hospital, Moorfields, London. In the spring of 1875 he located in Savannah, Ga., as a strict specialist, where his exceptional ability soon established a very gratifying practice. In a short time he had the honor of being elected to the Chair of Diseases of the Eye and Ear in the Savannah Medical College. In 1877 he returned to his native state, locating in Raleigh, where he has continued in the active practice of his specialty since 1886 in partnership with his brother-in-law, Dr. Kemp P. Battle, Jr. under the firm name of Lewis & Battle.

In 1877 at Salem Dr. Lewis joined the State Medical Society, in which organiza-

tion he has served as member of the Board of Medical Examiners, 1880-84, president in 1890-91 and chairman of the Committee on Legislation for about twenty years until his resignation at the Hendersonville meeting in 1912. In 1885 he was elected a member of the State Board of Health and in 1892 its secretary to fill the vacancy caused by the death of the deeply lamented Thos. F. Wood of Wilmington, N. C. In this dual capacity as chairman of the Committee on Legislation of the Medical Society and secretary of the Board of Health he was chiefly instrumental in securing valuable amendments to the medical license law, in preventing threatened legislation that would have greatly impaired that most important statute and in placing upon the statute book laws bearing upon the public health which put North Carolina in the forefront of the Southern States, and in some lines on a parity with the most advanced states in the Union. Having developed the work of the Board or Health beyond his ability to properly attend to it in addition to his practice he proceeded to arrange for the increased and more rapid growth of that great work by obtaining the positive promise of a first class man (The present incumbent, Dr. Rankin) to accept the office of secretary of the Board. Having accomplished this, he resigned as secretary, to take effect July 1, 1909, having served seventeen years as secretary of this Board. Very appropriate and fitting resolutions in regard to his resignation were adopted by the conjoint session of the State Medical Society and the State Board of Health at the meeting in Asheville the same year. In 1905 he was elected president of the National Conference of State and Provincial Boards of Health of North America (United States and Canada) and in 1907 president of the American Public Health Association (United States, Canada, Mexico and Cuba). In appreciation of his labors for the uplift of his profession and in the cause of the public health he was presented with a very handsome gold-headed cane by the State Health Officers Association. In 1912 the degree of LL. D. was conferred upon him by his Alma Mater, the University of North Carolina.

For twenty years he was professor of Diseases of the Eye and Ear in the Leonard Medical School and of Diseases of the

Eye in the graduate department of the Medical School of the State University as long as it was maintained.

In addition to his strictly professional work, Dr. Lewis has always taken an active interest in public education, advanced farming and good roads.

Dr. Lewis is at present and has been for many years a member of the Board of Trustees of the State University, St. Mary's School, St. Augustine Normal School and of the School Committee of Raleigh Township. He is a director of the State Sanatorium for Tuberculosis and of the Citizens National Bank, senior warden of Christ Church parish, president of the State Association for the Prevention of Tuberculosis and of the State Audubon Society.

Whatever success Dr. Lewis has attained, and compared with his contemporaries his undertakings are mountainous, he attributes to his mother and to his early training.

Unexpected Losses of Life Companies.

By Dr. J. H. Florence, Medical Director of Great Southern Life Insurance Company, Houston, Texas.

When a policy is issued on a life it is expected that the holder will live out his expectancy and the company will make a profit on the business. However, on each and every policy-holder money is not made because of a number of unexpected deaths. I herewith enumerate a few of the leading unlooked-for sources of losses to life companies:

DEATHS BY VIOLENCE.

This includes railroad, automobile and all accidents including suicide, homicide and ptomain poisoning. Of course, there is no way to precast any of these unless it be that exceptionally bright local medical examiner might suspect a suicidal tendency, knowing the applicant's mental tendency, family or financial trouble.

TUBERCULOSIS.

While this disease is contagious, we should never overlook the inherited tendency. As a rule, if an applicant gives a truthful family history, we have no hesitancy in rejecting him if he has Tuberculosis in family and he is young and light weight as compared to height. While this is important, we must be on the alert for an applicant's association with tubercular subjects. For this reason most companies postpone an applicant at least three years if he or she has lived in a house with a consumptive, and five years if it be husband or wife. It is a very common occurrence

to have applications from first-class risks who never mention these facts, and here the local examiner is expected to make careful inquiries along these lines. Companies have accepted these risks who were in prime health, at the time, but from an association with a tubercular case they contract the disease. The applicant may not mention the fact, not thinking it important, and he may be a stranger to the examiner; the man is passed, gets his policy, and dies within two years.

DISEASES OF THE CIRCULATION.

Under this heading, of course, would be remote heart defects, artero-sclerosis, but the one thing that is a nightmare to the companies is deaths from unreported syphilis. It is a constant occurrence to have deaths from paralysis and apoplexy in men above forty years of age, who probably have recent policies. No blame should be attached to the local examiner, as scores of the applicants have few, if any visible signs of syphilis. Of course, the examiner should look well for nodes, scars and other evidence, but so many of these cases had just enough treatment to obliterate these external signs, and yet have blood vessels ready to rupture. In these cases we expect some saving from the use of the blood pressure instrument at the time of examination.

KIDNEY DISEASE.

There is practically only one conclusion when policy-holders die within two years of kidney disease; that is that the local examiner failed to do his duty. In my opinion the doctor who takes a fee for an examination and states that he made a urinalysis, and did not do so, or even slighted the work, is worse than a highwayman. The careless examiner costs the companies far more money than the crooked one, as there are very few crooked examiners as compared to the careless fellows. Life Companies pay what they think a fair return for the work, and being all that is asked, by organized medical bodies they certainly have a right to expect a careful and painstaking examination.

STOMACH TROUBLE.

Many applicants die soon after receiving policies from the different forms of stomach trouble. In these cases many of them are not suspected, as the man looks healthy at the time of examination. The local examiner should question closely regarding every answer such as "acute indigestion" a few years ago. This is a very elastic term, covering anything from a belch to cancer. Two recent deaths where the parties policies a few months old gave histories of "acute indigestion

from over-eating" "never went to bed". One died of cancer; the other had an ulcer.

Life Companies do not expect impossibilities from local examiners, but a careful, searching examination, not only recording a full answer to each question, but additional information that he may elicit or suspect from the applicant.

The examiner should never lose sight of the fact that he is appointed by the Medical Department, paid by the company, and owes nothing but courtesy to the agent and a square deal to the applicant, and, above all, in cases of doubt turn the scale in favor of the company.

An error made by the local examiner in failing to detect a heart murmur, or a failure to find first evidences of tuberculosis, or to pass an applicant after a careless examination of the urine can cost the company not less than One Thousand Dollars; hence, great care should be taken in the examination of each and every applicant that losses should be confined to the natural expected causes.

Midwifery and Early Infant Mortality.

By C. E. Terry, M. D., Jacksonville, Fla.

A consideration of the mortality of the first year of life, not only startles us with the extremely high rate, but indicates that at this period are operating a combination of factors which at no other period unite to exact so heavy a toll of human life. At first glance we might suppose that the age period alone, with the influence of its attending congenital weaknesses and deformities, might account for a considerable number of these deaths. This is not borne out, however, by the deaths that occur during the first few days of life, when the most fatal of the congenital malformations should exert their greatest influence.

The figures for my own city show that for the past year, but 13.3 per cent. of infant deaths have occurred during the first three days of life. Following up the age periods of the first year and relating with these periods possible fatal influences, our attention is soon called to a period which furnishes a very much larger percentage of deaths than that of any other period of similar length throughout the first year. This period is that from the fourth to the fourteenth day inclusive and gives 23.3 per cent. of all deaths occurring in the first year, for the year in question, 1913.

Leaving this period for further consideration later, we find that the first month of life furnishes 42.2 per cent. of all deaths of infants under one year. After the end of the first month a rapid decline in infant

mortality occurs and a tabulation by causes shows that the usual fatal infectious diseases, intestinal disorders and in general those preventable maladies with which sanitarians most concern themselves, are the most active factors. The following table groups our infant deaths for the past year in the periods thus briefly referred to.

Under 3 days: 24, or 13.3 per cent.; 4 to 14 days: 42, or 23.3 per cent.; 14 days to 6 months: 75, or 41.7 per cent.; 6 months to 1 year: 39, or 21.7 per cent.

To return to the period of greatest mortality, that from the 4th to the 14th days inclusive. Here we find, that the period when the ordinary infectious diseases should play an active part has not yet arrived and deaths from these causes are found scattered throughout the first year but after the first month. The same may be said of intestinal disorders due to unclean or otherwise improper feeding. The period in which the largest number of babies are breast fed and during which the addition of other articles of diet is least likely to be made by ignorant parents, is during the first two weeks of life. Indeed in a review of all the leading causes of infant mortality, or rather those commonly so considered, we find that during the first two weeks of life infants are especially exempt. In spite of this we find the large percentage of deaths referred to above.

It becomes at once apparent that we must seek some other factors which might reasonably be expected to operate at this period. I regret that I have had no opportunity to study, in this connection, the figures of other communities, especially those of the North, East and West. A much to be regretted lack of uniformity in mortality tables renders the information desired difficult of access and throughout my remarks therefore I am confined to the figures of my own city.

Our birth registration shows that for the past five years 51.6 per cent. of all babies born in Jacksonville have been attended at birth by midwives. It is interesting to note, though not pertinent to the subject, that for the same period of five years the average still-birth rate in the practice of these women has been 15.0 per cent. as against 8.2 in that of physicians.

Familiarity with the type of women pursuing this vocation is sufficient to convince anyone of the possibilities for fatal attentions at the time of birth and the number of babies dying during the first year without any medical attendant led to the discovery that a great many such were attended by midwives. We have required that in such cases the midwife fill out the death

certificate. The large majority of such deaths have occurred in the first month of life, it being a not uncommon opinion among the more ignorant classes, that midwives are quite as competent as physicians, in caring for infants during the first few weeks of life.

Taking into consideration their lack of obstetrical knowledge and the opportunities for grave infections arising therefrom at the time of birth, together with the opportunities for further harm during the period in which they are most frequently called as medical attendant, we see that the first month of life presents a period where the ignorance of these women bears a very close possible relation to early infant mortality.

The causes of death occurring on the certificates in my possession are, for the most part, impossible of classification as "colds," "too weak to live," "hives," "convulsions," "thrush," etc., but occurring with disquieting frequency is lockjaw. Investigation of the methods of these women, made during the latter part of 1913, have thrown considerable light on the subject. In this connection I shall quote from my report for 1913.

We find in studying the infant mortality table in the report "13 deaths from tetanus neonatorum, 11 of these are shown by the birth certificates to have been attended at birth by midwives. Under "convulsions of infants" we find 5 of the total 8 occurring at the age period of tetanus neonatorum, i. e., within the first two weeks of life. These were all attended at birth by midwives. Again under "Premature Births" are 4 negro deaths in this same age period and under "Ill-defined," 11 negro deaths are again recorded in this age period, all of which were attended at birth by midwives. The classification of deaths, where the sole attendant was an ignorant negro midwife, is probably not at all accurate. On those death certificates classed under "Tetanus" however the cause is given by the midwife as "lockjaw" and the symptoms of this disease are sufficiently characteristic to lend credence to the statement, even were their known methods of conducting obstetrical cases not such as to corroborate their diagnosis.

"A knowledge of these facts leads one to view with grave suspicions of tetanus other deaths attended by these women when occurring at this age period, even when, perforce, classified under other headings. Here we have strong presumptive evidence that, besides the 11 deaths attributed to lockjaw, occurring in the practice

of these women, 20 others were also due to this cause.

"The last heading in the table shows 30 negro deaths, all of them attended from birth to death by midwives. Accounting for the 11, occurring during the first two weeks of life, as probably tetanus, we find 19 which we can not even attempt to classify so poorly are the causes defined. The effect of this ignorant practice is seen mostly among the negroes and undoubtedly plays an important role in their high infant death rate."

We have recently discovered that "hives" given as a cause of death, signifies tetanus, it being the belief of these women that if the fine vesicular rash of newborn infants fails to appear that it is the cause of an ensuing tetanus. Their whole mental equipment which supposedly fits them for practice is founded on superstition and voodooism. A highly recommended unbilical dressing consists of grated nutmeg and raisins while lard or fat bacon are preferred by others for this purpose. A straw laid on a baby's head is considered a certain cure for hiccoughs and the most approved prophylactic for stomatitis is the wiping out of the infant's mouth with one of its own soiled napkins. The occurrence of tetanus in the infant is attributed to the fact that, during labor, the mother did not keep her mouth closed, and the severity of after pains is claimed by them to be relieved by wearing, tied about their wrist, some dirt secured from under the left hand corner of the front steps. Of almost general belief is the great danger attendant upon bathing the baby or mother, changing the bedding or even sweeping the room within nine days after delivery and if to such imprudences were added the removal of ashes from the stove or fireplace, it is doubtful if even the most gifted midwife could prevent the dire consequences which would assuredly ensue.

The latest addition to my medical armamentarium is a strip of black cloth in which are tied five knots. When this much is accomplished the wise midwife blows three times upon each knot and then fastens it about the infant's abdomen as a preventive for lockjaw. Other therapeutic agents of like character might be mentioned but while ridiculous to relate, their tragic bearing on early infant mortality must not be lost sight of. Not only must we take into account their active role as agents of death, through their filthy methods, but also their passive agency which operates through the custom of supplanting skilled medical attention with the ministrations, however innocuous, of these women dur-

ing the early weeks of infancy.

The situation presents problems of a most perplexing nature which the sanitarian of the South must solve if our infant death rate is to be brought within even reasonable limits. To debar them from practice would at once deprive more than half of the child-bearing women in Jacksonville of their customary attendants. Many can afford no better service nor could the medical profession be expected to undertake this practice for the small remuneration it would afford. After much careful consideration of existing conditions and the apparent available remedies a bill regulating the practice of midwifery was presented to the city council. This bill failed of passage when first introduced but was finally passed in December of last year. It defines the practice of midwifery as follows:

"As used in this ordinance the practice of midwifery means the offering or undertaking by any person to assist for a compensation of any kind a woman in normal child-birth, but it does not include at any child-birth the use of any instruments, nor the assisting of child-birth by any artificial, forcible or mechanical means, nor the performance of any version, nor the removal of adherent placenta, nor the administering, prescribing, advising or employing in child-birth of any drug other than a disinfectant. This ordinance shall not be construed as applying to any practitioner of medicine authorized to practice medicine under the laws of the State of Florida, nor shall it authorize any midwife to practice medicine."

It further requires a permit from the Health Department in order to practice midwifery, the securing of this permit to depend upon the satisfactory passing of an examination in the elementary principles of obstetrics. Lastly it stipulates that the Health Department shall furnish free instruction to midwives in these elementary principles. No plan seemed destined to ultimate success that should not recognize the inborn customs of the classes affected, and the bill is framed to preserve the integrity of the midwife as a matter of present expediency and to minimize, as far as possible, her dangers by training her in the most important duties of her calling.

We are at present conducting such classes three times a week, I am confining the course principally to the reasons for and principles of surgical cleanliness in handling cases of child-birth, an understanding of certain of the more common complications of labor requiring skilled intervention and the employment of outfits

for the prevention of tetanus (sterile umbilical tape and dressings) and for the prevention of ophthalmia. The possession and use of basins, soap, nail brush and antiseptics for preparing the hands of the midwife as well as the patient will be enforced as rigidly as possible and each midwife must attend at least one confinement with one of the department's nurses. How far this effort will succeed in lowering our infant mortality remains to be demonstrated. It involves a considerable amount of labor during the first year of its enforcement as we have about 100 midwives in the city. I have been able to devise no better plan—up to the present time, but it is not unlikely that our experience will enlighten us considerably.

I am convinced that even yet we are far from knowing the full extent of the dangers attendant upon midwifery as practiced by these women. Some other observations lead me to believe that the same statement applies, although to a less degree, to the practice of obstetrics by the medical profession. There is no small amount of carelessness and ignorant work discernable and wherever found it has a very direct bearing on infant mortality during the first month of life.

Bacteriology has made possible the triumphs of modern surgery; it has been called into the arts and sciences in many ways for the benefit of mankind; it has been applied to the prevention of infant mortality through the purification of milk and water supplies, and in various details of infant welfare work; it has more recently changed completely our ideas concerning the spread of contagious diseases and thereby made possible aseptic nursing of these cases. Its application to obstetrics as practiced in maternity hospitals and by the more able members of the medical profession has done much to reduce the dangers of labor to both mother and child, but it would appear that a large field, where a knowledge and application of the simplest teachings of bacteriology would save thousands of infants annually, has been overlooked or neglected by those occupied with the prevention of needless deaths.

If we would avail ourselves of this opportunity and prevent, as would most assuredly be done, a large proportion of the deaths occurring in the early period of infancy, we must supervise more closely the practice of midwifery and stimulate both legislation and education based on tenets more modern than the folklore brought to our Southern State from Africa.

Surgical Indications and Results in a Series of Nervous System Lesions.

By Charles M. Remsen, M. D., of Atlanta, Ga.

It is impossible to point out the circumstances which have contributed to the evolution of the successful treatment of neuro-pathological cases in such a brief consideration as is presented here. Suffice it to say that the strides have been almost unparalleled which have led to the successful correlation of the various symptoms with the concrete pathological alterations of which they are mere clinical projections; and, as fruitful have been the attempts to cope with these conditions by methods which formally had been considered surgically impracticable.

With a series of brief histories of cases which have recently come to our notice such as we are presenting, we have made no attempt at classification but rather have tabulated each case in our practice in the order in which opportunity has been afforded for its study.

Our endeavor is merely to sketch over a few of the general considerations, the positive indications for operation, and the result in those cases operated in order perhaps to indicate roughly various of the symptoms and their causes and to throw a more favorable outlook on surgical intervention in many of these cases which are so often considered hopeless.

Case I.—Tumor Cerebri. Left Cephalgia. Edema of Optic Nerve Heads. Diminished Vision. Periodic Vomiting Spells. Severe Hunger Attacks. Decompression. Improvement in Vision. Relief of Gastric Symptoms.

J. M. —, furniture dealer, aged 52, referred by Dr. Dunbar Roy. Past history not important.

Present illness started seven months ago, when patient awoke with a left supra-orbital neuralgia. This increased rapidly until it involved the whole left side of the head. Two months ago the pain became so severe that it caused the patient to take to his bed. Six weeks ago, the patient had a severe attack of vomiting. At this time his left disc showed marked edema, and his vision was diminished. In the last three weeks the vomiting spells have been severe and frequent and associated with attacks of great hunger.

The patient has lost much weight. Lately he has become hyper-irritable to sound and light impressions.

Examination showed edema of both discs of marked degree. Pupils dilated, but react slowly to light and accommodation. Visual fields were contracted, though on account of the poor vision, this was difficult

to ascertain with any degree of accuracy. There was evidently no hemianopsia. Pulse, 52, and blood pressure, 200. There were no signs of disturbances in the glands of internal secretion. Slight tenderness existed in the left fronto-parietal region. There was no aphasia. Sensory and motor disturbances over the body were absent.

Considerations—This case represents a class in which clinical evidence, as given by certain symptoms, which will lead us to the location of the disturbing factor, is lacking. We are dealing with increased intracranial pressure, whether due to tumor, or to an increase in cerebro-spinal fluid secondary to tumor, since the acute cerebral conditions may be ruled out. The interpretation of the existing symptoms indicates that the attempts at relief can not be directed immediately at the lesion, but rather must we relieve pressure by general measures. Accordingly, a submuscular decompression is indicated as our first step until possibly some symptom may guide us more directly to the lesion itself.

Operation—Exposure revealed a pulsating dura. The underlying brain was normal in appearance, but under great tension, and the tendency for this to herniate through the skull window was marked. Palpation and puncture revealed nothing. Muscular closure was accomplished with great difficulty owing to the underlying tension.

Post Operative Notes—Marked subjective improvements in vision noted in 24 hours. An examination ten days later as yet showed no objective change in the appearance of the discs. The patient in the following three weeks gained about five pounds, and experienced a complete disappearance of his gastric attacks. The blood pressure at this time was reduced to 160, and the pulse was 68. The cephalgia which had disappeared showed a slight tendency to return at this time in the form of a supra-orbital neuralgia of the left side. During a recurrence of this pain, six weeks after operation, patient was given morphine by a friend and since that time, according to his statement, has been taking this medicine regularly. It has been impossible to keep track of this patient since then. At the last visit his gastric attacks were still absent, and his improvement in vision remained intact.

Case II.—Hyperpituitarism. Bitemporal Hemianopsia. Acromegaly. Operation Refused. Retrogressive Symptoms.

S., aged 26, Flowery Branch, Ga., referred by Dr. Dunbar Roy.

Present illness is marked by a gradual loss of vision for the last few months. During this time the perimetric examinations have shown a diminution in the field of

vision. Attention to the cause of this visual disturbance was called by the extremely large hands.

Examination—This was unfortunately curtailed. Sugar tolerance could not be tested, and an X-ray examination of the epiphyses was not possible. Psychically the patient was apparently normal. The skeletal examination showed a marked overgrowth. The whole facial expression was heavy, and this appearance was due to a marked enlargement involving practically all of the facial bones. The hands and feet were distinctly enlarged, though careful measurements were impossible on account of the limited time. This case, then, represented a class in which there was predominate hyperpituitarism, the process evidently succeeding ossification of the epiphyses, and hence leading to an acromegalic condition rather than a condition of gigantism (typus Marie). None of the symptoms of hypopituitarism have supervened. The X-ray showed a distinctly enlarged sella. The skin was normal in appearance. Piloosity normal, and there was no excess adiposity. Nothing clinically observable concerning the functions of the other ductless glands. Blood pressure practically normal, and pulse 76.

Considerations—The gradual disturbances in vision as noted by Dr. Roy were extremely typical, indicating a tumor in the region of the pituitary body. The skeletal overgrowth indicated a late hyperactivity of the gland in contradistinction to the manifestations of pituitary activity before the period of epiphyseal ossification as seen in cases of gigantism (typus Launois).

We were without doubt dealing with an hypophyseal tumor not associated with a general increased intracranial pressure, but nevertheless, showing marked evidences of local pressure upon the optic tracts. The indications were, then, for a trans-sphenoidal subsellar decompression to relieve the local pressure, and at the same time to accomplish a partial hypophysectomy. Operation refused. A note to Dr. Roy later stated that there had been a gradual regression in the mentality and visual power of this patient.

Case III.—Fracture of the Base of the Skull. Edema Cerebri. Meningeal Hemorrhage. Exploratory Craniotomy. Control of Hemorrhage. Decompression. Cure.

L. A. —, aged 34. Past illness unimportant.

Present Illness—Patient seen four hours after having fallen down stairs. He was rendered unconscious by his fall, but within two hours after this became semiconscious

again, but lately has shown marked irritability.

Examination—Patient is extremely irritable and cries out almost constantly. There is no visible evidence of fracture of the vault. He is utterly unable to respond to questions. There is marked ecchymosis of the left eye lid, but there is no bleeding from the ears, and no signs of cerebrospinal fluid coming from the nose. There is a continual flinging about of the extremities, especially of the left side. The right extremities both show a distinct weakness, as the patient resists passive motion. Pupils dilated, irregular, and show little response to light. Examination of the discs show a slight edema on the left. Blood pressure, 190, and pulse, 60. There is definite incontinence. Patient was watched for about two hours, and the changes noted were as follows: The pulse reduced to 52, and blood pressure increased to 200, and the irritability of the patient has given way to a more profound irresponsiveness. The right extremities could not be moved at all, and the left were moved much less than when first seen.

Considerations—In this case, we are dealing with a head injury with no visible fracture. The evidences of brain irritation and pressure are marked. Our important indication, then, is to relieve or avoid any more injury to the brain than has been caused directly by the accident. We are confronted with an edema, or an increase in the amount of the cerebro-spinal fluid, or hemorrhage which, judged by the clinical manifestations, is increasing. This condition may be well compared to the tight application of a bandage over an extremity which is undergoing a reactive swelling. To relieve this condition, we must allow room for expansion. Again, must we permit a free hemorrhage which may be checked by exposure and proper surgical treatment? Against this, it is stated that many such cases will get well without surgical intervention. Nevertheless, in these border line cases where it is impossible to foresee the exact result, we cannot deny that taking this class as a whole, those that are surgically treated show a saving of somewhere in the neighborhood of 50 per cent. against about 20 per cent. in those in which the expectant treatment is used. (It must not be supposed for an instant that we include in this class of cases those which may be tabulated as distinct concussions). From this standpoint, then, we are justified in the decompressive operation which at one time allows us to relieve the edema, apply surgical measures towards checking the hemorrhage, and to apply drainage if necessary,

even into the middle fossa. One other principle must be considered. The late effects of brain trauma—mental confusion, sensory and motor disturbances, and post-traumatic epilepsies—are very much more frequent in the cases which have not been submitted to operative intervention. In this respect the compilations of the Russo-Japanese war are extremely interesting, and bear out this statement to a marked degree. Our signs in this case point strongly to a left sided irritative lesion followed by a paralysis on this same side.

Operation—The left side was opened, and the dura showed a dark appearance. Upon incising this there was a gush of blood mixed with cerebro-spinal fluid, and the brain tended to extrude through the opening. Careful manipulation with brain spatula finally revealed a bleeding point in the anterior branch of the middle meningeal. This was controlled by crushing. During this time, there was quite a distinct loss of cerebro-spinal fluid. When it was seen that the hemorrhage had been controlled, it was decided, on account of the edema of the cortex, and the increase in fluid, both of which seemed to unite in forcing the brain outwards, to enlarge the opening in the skull. A wisp of protective was inserted into the subdural space, and extreme care was taken in the muscular closure over the skull deficiency.

Post Operative Notes—There was some drainage in the next 24 hours. The drain was removed at the end of this time. Mentality now had cleared up almost entirely, and the patient was able to move the right arm and leg fairly well. The blood pressure was 180, and pulse, 68. During the next three days the mental condition became perfect and the patient sat up in bed, and had practically complete use of his arm and leg. Stitches removed 48 hours after operation. Wound healed p. p. Seven days after operation, patient left hospital. The blood pressure at this time was 145, and the pulse, 76, and with the exception of the slight increase in the reflexes on the right side there was nothing abnormal to be noted in the entire neurological examination.

Case IV.—Tumor Cerebri. Jacksonian Epilepsy. Paralysis of Right Hand and Foot. Right Homonymous Hemianopsia.

F. —, aged 10. When one year old, patient had an attack of right sided convulsions lasting for nine hours, and was in a stupor for three weeks. The right extremities were useless for 1½ years, according to her mother. At irregular intervals these right sided attacks have continued until the present time with interval of

respite, the longest of which was 22 months. Lately, there has been an increasing number of attacks of petit mal as well as occasional rather severe attacks of clonic convulsions, starting with a drawing of the head to the right side and finally involving in these spasms the right arm and leg. Occasionally the attacks are tonic in character, and when this is so, the attacks usually only involve the head and neck muscles.

Examination—Blood pressure, 120, and pulse 100. No aphasia. Mentality good. Pupils normal, equal, and react to l. and a. Perimetric examination by Dr. Hugh Lokey shows right homonymous hemianopsia. (See chart). The cranial nerves are normal, with the exception of the seventh. There is distinct weakness in the facial muscles on the right side, and this weakness is seen in the right extremities, especially in pronation and supination of the fore arm. There is distinct atrophy in the muscles of the hand, and it is impossible for the patient to perform any delicate movements with her hand, and she is utterly unable to grasp such an object as a pencil or a knife and fork. The foot shows marked dragging when the patient walks, and there is a distinct paralytic equino-varus. Sensory disturbances are not present. The reflexes are increased on the right side. The X-ray in this case was negative.

Considerations—We are dealing with an irritative and destructive lesion of some sort involving the left motor region. This localization is amply justified by the right-sided clonic spasms, the primary symptom of which is twitching of the right corner of the mouth. That the lesion is destructive is proven by the weakness in the musculature of the right side. One other important fact. The right homonymous hemianopsia indicates a lesion in the left tract or radiation. Certain reactions indicate that the radiation back of the primary visual centre is interfered with rather than the tract. This, then, indicates both a cortical and subcortical lesion. Of the origin, we are ignorant. Trauma possibly being a factor it is possible we are dealing with a cystic condition, but the exact nature is impossible to determine. Suffice it that conditions have not progressed persistently, and we are assured that we are neither dealing with a rapidly growing tumor, nor one which is associated with great intracranial pressure. The absence of the aphasia in this case is rather noteworthy.

The indications in this case are strongly for exposure of the left motor region, and subcortical exploration if necessary. In the absence of macroscopic lesions the excision

of the primary "spasming" centre must be carefully considered. It is hardly out of place here to mention the fact that numerous irritative convulsions arising from one or the other motor region have been alleviated in the absence of gross changes by the excision of that portion of the cortex from which the convulsive storm originates. (Operation under advisement).

Case V.—Trifacial Neuralgia Involving the Second Branch. Six Months Relief by Injection. Recurrence. Persistent Relief by Same Process.

E. D. —, aged 39.

Present Illness—Patient has had attacks of neuralgia involving the second division of the fifth nerve for four years. At first they occurred about once a month, later they became more frequent, and very much more severe, and sometimes lasted 12 to 24 hours. Lately the pain has been so excruciating as to cause the patient to entertain ideas of suicide.

Examination—That portion of the face supplied by the second division of the fifth nerve is extremely hyper-aesthetic. This is the region to which the pain is referred.

Considerations—This patient is confined to her bed and one of the causes from which this neuralgia may be a reflex cannot be attended to. Hence, we are forced to deal directly with the nerve. In a condition such as this, the injection method is the one of choice, since we are dealing with a local condition not involving the whole nerve. Hence, our *modus operandi* does not involve disturbing the Gasserian ganglion.

Operation—The injection needle was inserted under the zygomatic process, and the nerve sheath entered at its exit from the foramen rotundum. About two hours later, the pain had entirely disappeared. At this time there was some weakness in the muscles of mastication.

Post Operative Note—The numbness which supplanted the pain, as well as the difficulty in mastication due to the presence of motor fibres in this branch persisted for about six months. At this time there was a recurrence. Similar procedures were used, and the patient has been entirely free since that time (4 months ago).

Case VI.—Tumour Cerebelli (Right). Ataxia. Double Choked Disc. Blindness. Death.

G., aged 19, seen with Dr. Børn at McRae, Ga.

Present Illness—Patient's history started with stomach symptoms, and difficulty in walking. For this, the patient was treated by gastric lavage for 18 months. Follow-

ing this the patient became persistently worse. A general weakness ensued, and the patient was unable to walk without falling to the right side. About nine months ago, the patient began to notice dimming in vision, and of late, frequent vomiting, and severe headaches have ensued. For the last six months the patient has shown a steady loss of vision which is now at the point of almost complete blindness. There is very marked dulling of the intellect. Patient has been bed ridden for four months.

Examination—Showed a very marked grade of edema of both discs. Inactive and dilated pupils, and partially paralyzed extraocular muscles. Blood pressure, 190, and pulse, 52. Mentality extremely dull, but the patient could be roused by persistent questioning, though no intelligent answers could be obtained. Patient frequently cried out, and seemed to be in great pain referred to his head. The head itself showed an hydrocephalic configuration. Owing to irresponsiveness careful tests were impossible. Hearing and taste were normal as far as could be judged. The 7th nerve did not seem to be affected. The sense of smell had not been obliterated. Tests for ataxia were extremely difficult, but the patient was utterly unable to perform the finger-nose test. The patellar reflexes were exaggerated, and there was a slight Babinski. The triceps reflexes were normal. Sensation of pain over the body seemed to exist fairly well. When patient attempted to resist passive motion his muscular power seemed good.

Considerations—Interpretation of the clinical manifestations demonstrate an increased intracranial pressure. Further than this we are led to believe that the ataxia is of cerebellar origin, and from a previous report, the symptoms point towards an involvement of the right hemisphere. Unfortunately we are only able to study this case at an extremely late period, and the perimetric examination cannot be made. The condition at present, in general is precarious. The advisability of a direct attack on a cerebellar tumor can hardly be considered. Primarily, a palliative decompression is the procedure indicated. With this in view, this patient was removed to Atlanta several days later, but died immediately after entering the hospital. No autopsy was obtained.

Case VII.—Perineuritis (Cancerous?) of the Left Cervical Plexus. Resection of Clavicle. Exposure of Plexus. Intraneural Injection of Trunks Formed by C5, C6, C7, and by C8 and D1. Relief.

L., aged 61, of Alabama. Past history shows secondary involvement of the axil-

lary glands some six months ago. Glands removed at this time. Pain was a symptom which rapidly increased, and was located indefinitely throughout the whole left area. In the last three months, motor disturbances have appeared, and the various motions have one by one either diminished or disappeared entirely.

Examination—Reveals hyperaesthetic areas in the left upper extremity, as well as areas of other sensory disturbances. Motion is limited. The arm can be moved only very slightly, and the fore arm can be flexed only a few degrees. Wrist and fingers show active motion of about five degrees only. Flexion and extension, supination and pronation are possible only to a very small degree. No definite cancerous glands were felt in the neck, and there was no cancerous involvement in the axilla.

Considerations—The sensory and motor examinations demonstrate disturbances so great that we are unable to single out any one trunk that is alone affected. Likewise, disturbances in no way correspond to definite segmental lesions. Relief can be obtained by breakage of the continuity of the sensory tracts. Ideally we would consider laminectomy with severance of the posterior roots which are directly connected with the plexus. Unfortunately the general condition of this patient is not good, and it is deemed imprudent to attempt this operation. Next we may sever these conduction paths at the plexus itself, knowing that breaks in continuity here will involve as well the motor functions. Nevertheless, in view of the predominance of the sensory disturbances it was considered of little importance to preserve the motor function of the arm at the expense of the relief of the sensory disturbances. It was thought that possibly there was an inflammatory condition about the cervical plexus which might be alleviated, and together with this we considered the advisability of the injection of anaesthetizing fluid into the body of the nerve tissue.

Operation—The cervical plexus was exposed, after partial resection of the clavicle. The main trunks were located and perineural scar tissue was found surrounding portions of the plexus. This did not show any definite cancerous glandular involvement. As far as possible the trunks were relieved of this scar tissue. Injection was then performed under the perineural sheath. The wound was closed and healed p. p.

Post Operative Notes—As was expected, the arm was practically devoid of motion. The pain, however, within 24 hours after operation had almost completely disappear-

ed, and the patient was able to sleep well and gained quite a little weight the following two weeks. During this period the paralysis of the arm disappeared to a slight extent, and once or twice there were occasional shooting pains in the arm. Three weeks after operation, the patient had one very severe attack of pain in the arm which disappeared in the course of 48 hours. During the following three months, letters from the patient indicated a marked relief in the condition. At the end of this time the arm became markedly swollen, and with this were associated painful sensations. Patient came to Atlanta at this time, and the edema easily relieved by simple measures, and at the same time there was an associated diminution of the pain. One month later, letter received indicated that there was still slight pain in the arm, though diminished to a distinct degree, and rarely interfering with sleep.

Case VIII.—Concussio Cerebri. Expectant Treatment. Recovery.

D., aged 7. Patient seen about 20 minutes after having fallen out of a high tree.

Examination—Showed general restlessness and irritability with slightly dilated pupils which reacted to light and accommodation. No visible fracture. The examination of the extremities showed no weakness or change in the reflex on either side. There was no incontinence nor was there unconsciousness. Patient threw arms and legs about aimlessly, and cried frequently. The blood pressure was increased and the pulse measured 60.

Considerations—We are dealing here with a case in which the signs of increased intracranial pressure are absent or extremely mild. With this in mind, we are fully justified in waiting for more definite signs. (Compare considerations in Case III).

The condition at examination persisted for about eight hours. Following this there was a rapid clearing up of a confused mentality and restlessness, and the patient regained normal conditions in 48 hours.

Case IX.—Cyst of Left Parietal Cortex. Jacksonian Epilepsy. Loss of Sense of Position. Stereognostic Sense Disturbances. Craniotomy Evacuation and Subdural Drainage of Cortical Cyst. Cure or Relief of All Symptoms.

T., aged 59. Seven years previous, patient had a sudden attack of unconsciousness and subsequent inability to express himself upon the return of consciousness.

Present Illness—In the last twelve months the difficulty in speaking has gradually increased, and there have been certain new symptoms which have appeared

principal among which are, attacks of epilepsy of the Jacksonian type involving the arm and leg of the right side; localized sensory and motor disturbances in the hand which of late have likewise involved the right foot; an increasing difficulty in speaking; and a tight sensation in his head, a symptom which has appeared only lately.

Examination—Mentality, excitable. Head, normal shape. There is no evidence of hydrocephalus. No choked discs. Slight atrophy. Diminution of fields in both sides. Sensation:—Over the hand and forearm there were distinct disturbances of heat, touch, and pain sensations, while over the foot there is a disturbed sense of touch. There was weakness in flexion, and likewise in extension, abduction, and adduction of the hands and fingers. The epileptic attacks were seen as alternating supination and pronation of the fingers and wrist, together with flexion and extension. The subjective sensory disturbances were numbness and tingling in the forearm and hand. Study of the aphasia demonstrated sensory and motor types. A careful study of these is impossible here, but the result suggests both an involvement of the angular gyrus and of Broca's area. The sense of position in the right hand and arm was very much disturbed. Apraxia of the right hand was marked.

Considerations—From a study of the symptoms in this case there were evidences of a disturbance in the hand centre of an irritative character. Likewise, there were more or less disturbances in the hand and arm centre, and the aphasic symptoms suggested strongly a disturbance in the angular gyrus as well as in Broca's centre. Judging from the history of this case some permanent and increasing disturbance existed in these regions. Accordingly the indications suggest an exposure of the left parietal region extending from the fissure of Rolando back to the angular gyrus.

Operation—Two stages. Parietal region exposed. A cyst was found involving an area extending from the fissure of Rolando to the angular gyrus. The cortex near the cyst was atrophied, pale, with underdeveloped convolutions, and showed many signs of small punctate hemorrhages. Puncture of the cyst revealed fluid under marked tension. This was evacuated. The overlying wall of the cyst wrinkled up and collapsed. Owing to certain pathological conditions which were found here excision of the cyst wall was impossible. Subdural drainage was accomplished. The wound healed p. p. after replacing of the osteoplastic flap. The course of the patient in the next six to ten weeks showed an inter-

mittent improvement which towards the end of this period was extremely marked. The paralysis of the hand and foot disappeared, and walking was accomplished without effort. Patient was likewise able to use his hand without difficulty, having little trouble with the finer movements. The aphasic symptoms disappeared to a marked degree, and the patient at the end of this period was able to talk consecutively for five to ten minutes without any mistakes in his speech. Mentality, likewise, became less irritable and more normal in character. The Jacksonian attacks have never reappeared. Stereognostic sense was almost normal, and the position sense had disappeared.

Case X.—Hypopituitarism. Brain Fever (?) Hydrocephalus (Secondary). Loss of Vision. Decompression. Progress of Symptoms Stopped. Improvement. Sub-sellar Decompression Under Admiration.

H., aged 36, referred by Dr. Hansell Crenshaw. The past history was specific and the Wassermann positive. Accordingly, this patient was given salvarsan. There followed no improvement.

Present Illness—Patient at 19 had an attack of brain fever followed by an attack of paralysis (?) In October, 1911, patient had an attack of vertigo while walking, which was followed by unconsciousness and paralysis. He was sick for four weeks, during which time he vomited a great deal. He gradually left his bed, but has never been able to walk straight since. At this time his vision became poor, and towards the end of 1912, he was scarcely able to see. The symptoms progressed until the end of 1913, when the patient became practically bedridden.

Examination—June, 1914. Loss of vision almost complete. Patient is able to distinguish light only. Pupils are dilated, and reaction to light exists to a very slight degree. The patient's mentality has reached a low grade. There is marked incontinence. Severe headache is continually suggested. Questions provoke no response. Sensory examination impossible, owing to the mental condition, and likewise, the Ataxia could not be demonstrated. Attempts to stand alone were fruitless. There seemed to be no definite knowledge as to where his legs were placed. The stature of the patient was distinctly diminished, the hands delicate, and the fingers tapering, while the feet shared in these characteristics. The forehead was low and there was marked adiposity, as is seen in the typical typus Frohlich. The reversive infantilistic characteristics were likewise present. The pulse was increased to 86, and the

blood pressure was 190. Whether this increase in pulse was evidence of hyperactivity of the thyroid, it was impossible to decide. There were no signs of hypertrophy. Clinical evidences of disturbances in the other ductless glands were absent, unless we may take the skeletal undergrowth as a manifestation of disturbances in some of these glands as well as in the pituitary. The sugar tolerance was increased in this case. The body temperature was distinctly diminished. The pilosity was characteristic of the *typus Frohlich*. Patient's wife states that before the patient became bedridden there was a marked tendency for him to fall to the left on walking. The head, at present has a distinct hydrocephalic configuration.

Considerations—The distinguishing features in this case were: the loss of vision, the adiposity of the *typus femininus*, the increased sugar tolerance, the marked genital hypoplasia and lowered functional activity, the mental symptoms, and the skeletal undergrowth.

The picture presented suggests underactivity of the pituitary in the preadulescent stage leading to the skeletal undergrowth, while the reversible symptoms represent a continuation or perhaps exacerbation in the adult stage. The X-ray suggests struma and we are perhaps justified in considering this a primary pituitary tumor.

Operation—A palliative decompression was performed. Upon opening the dura the brain was found to be under distinct tension, with tendency to extrude. There was slight formation of connective tissue along the blood vessels. Nothing was made out on palpation or puncture, and the interpeduncular region was not explored owing to the patient's condition. Convolutions were slightly flattened. The opening in the skull was enlarged, and careful closure of the overlying muscular and fascial layers made.

Post Operative Note—Wound healed p. p. Stitches removed 48 hours. During the week following, patient's psychic state improved so much that he became somewhat responsive and volunteered that he could see light from the window. His mood became rather happy, and he frequently laughed while talking. Complaint was not made of headache. The improvement in vision was extremely slight. The sphincteric incontinence in the two months following gradually became less marked, while the patient has been and is able to walk a short distance with no assistance except guidance. His general condition, according to his wife is better than at any time in the past two years. There is still slight, but less bulging over the decompressive

field. The sellar decompression is at present under advisement.

Case XII.—Trifacial Neuralgia. Extirpation of the Gasserian Ganglion. Cure.

C. L., aged 29. The last four years this patient has had recurring attacks of trifacial neuralgia, and these have become more and more severe in the last two months. Recently the attacks have come on about once a week, and have been agonizing in character, so much that the patient says that he "would rather die than exist under these conditions."

Examination—While under observation the patient had one severe attack which was associated with a flushing of the right side of the face and extreme hyperaesthesia, and the pain was referred to the distribution of all three branches of the fifth nerve on the right side. There was marked aching in the eyeballs, and teeth, and there was distinct pain as the patient opened and closed the mouth. The right eye showed marked lachrymation.

Considerations—Under the existing circumstances and with a history that was negative for specific infections, and in the absence of demonstrable causes a Cushing modification of the Hartley-Krause Gasserian ganglion operation was indicated.

Operation—Subperiosteal resection of the zygoma was performed and the skull entered. The inferior maxillary nerve was located and working up from this the three divisions were isolated together with the ganglion and its sensory root. The peripheral branches were divided and the ganglion and the sensory root evulsed. Closure.

Post Operative Notes—Healing p. p. This patient has had complete relief. Pains were taken to protect the cornea from irritation, owing to its loss of sensation. Sensory examination revealed now a loss of sensations over the right side of the face, and there has been no recurrence.

Case XIII.—Tumour Cerebelli. Asynergie Cerebelleuse. Secondary Hydrocephalus. Marche De L'Ivresse. Adiadochokinesis. Hypotonia.

H., aged 14. At the age of four, patient had an attack of brain fever (?) which evidenced itself by high fever, prostration, unconsciousness, and stiffness of the muscles of the neck. Patient was bedridden for several months, following which he was unable to walk without assistance for about twelve months. Gradually he became somewhat better, and could get about without trouble. About four years ago, the patient had another attack which he says was similar to the first, and since that time he has been only able to proceed in an extremely ataxic manner.

Examination—The mentality of the patient is good, but he has a peculiar horae explosive manner of speaking.

Reflexes—Examination of the reflexes throughout the body shows various disturbances, most marked being the lack of patellar reaction. The biceps and triceps are diminished somewhat. The patient writes by grasping a pencil with the whole hand, and writing by moving his entire arm.

Ataxia—What is most marked in the patient's condition is the high grade ataxia in his arms and legs. In the pointing tests the patient frequently misses by a foot or more the object which he is attempting to touch. There is also a tremor. Attempting to walk there is a marked lack of coordination in the movements of the legs and trunk, whereby a falling, reeling, staggering gait is evolved.

Stereognostic sense of the hands is fair, and sense of position is moderate though somewhat disturbed. The sense of position in the legs is markedly disturbed. Both sides seem to be affected about equally. Patient has had no nausea or vomiting, and has only occasional headaches which are frontal in character. The blood pressure is 140, and the pulse 64. There are no signs of hyper- or hypopituitarism, or of disturbances of the other ductless glands. The head shows a slight hydrocephalic configuration. Percussion is negative, and there is no area of tenderness.

Considerations—There is an absence of optic nerve involvement in this case. The symptoms of general cerebral compression are absent, though there are attacks of vertigo suggesting an involvement of the posterior fossa. More especially, however, the disturbances noted indicate a lesion of the efferent apparatus of the cerebellum, as indicated by the asynergie and marked ataxia and the other symptoms noted. The cerebral nerves do not participate in the involvement. Whether we can lay stress on "brain fever" as a cause of cystic formation it is useless to attempt to determine. There is no indication that one side is affected more than the other in this case, and the intelligence of the patient has been such that Barany's tests were inconclusive. The mental condition precludes as far as we are able to decide an ataxia of frontal origin, especially in the absence of neighborhood symptoms.

We are probably in this case dealing also with a secondary hydrocephalic condition. Cerebellar exploration is in this case the procedure of choice.

Case XIII.—Fracture of the 2, 3, and 4 Lumbar Vertebra. Trauma of the Cauda

Equina. Sensory and Motor Disturbances of the Hips and Legs. Intermittent attacks of Paralysis of the Legs.

A. D., aged 25, referred by Dr. Hantsell Crenshaw. Three years previous patient had back injured in automobile accident. Unconscious for 48 hours. In a steel brace for five weeks. No special after-effects. One year ago, patient was in another automobile accident. Since this time patient has had pain in the back and hips and legs, which is almost constant, and sometimes extremely severe. Lately he has had two attacks of sudden paralysis of both legs which caused him to fall while walking, and kept him confined to his bed for two or three days.

Examination—There are various sensory disturbances. Motor disturbances are absent.

Considerations—In this case we are dealing evidently with a traumatic hemorrhage and destructive lesion in the cauda equina. From the X-ray it seems that this condition is secondary to a fracture of the spinous and transverse processes of the lower lumbar vertebra. Stereoscopic examination in this case was not taken, and it is not safe to hazard the nature of the lesion. Whether the sudden attacks of paralysis indicate that a displacement with pressure of some portion of the fractured vertebra exists, it is impossible to state. Traumatic cysts, scar tissue, perineural thickening are some of the possibilities with which we have to deal. A laminectomy has been advised, and it is hoped that the lesion concerned with these sensory and motor disturbances may be removed.

Case XIV.—Basal Tumour (?) Concentric Diminution of Right and Left Visual Fields. Late Tendency to Right Homonymous Hemianopsia. Transitory Paralysis of Left Sixth Nerve. Disturbances of Left Fifth Nerve. Sluggish Pupillary Reaction. Right Side.

J. E., aged 29, referred by Dr. F. P. Calhoun. Past history negative. Wassermann positive. Several months ago, patient had left sixth nerve disturbance evidencing itself by internal squint of the left eye. This has been somewhat evanescent in character, and of late has entirely cleared up. Patient has begun to lose his vision, and examination showed choked discs, which have increased persistently up to the present time. The fields of vision have contracted rather persistently, and interlacing of the color fields has become quite marked. The last examination has shown a tendency towards right homonymous hemianopsia. There have been quite marked sensory disturbances in the left side of

the face. The reflexes are all exaggerated. There is a suspicion of slight ataxia in the arms, though this is very slight. The patient shows a peculiar disturbance in mentality and an excitable loquacious state of mind (frontal lobe neighborhood symptoms (?). There are no signs of disturbance in the ductless glands.

Considerations—In this case we are dealing with a double choked disc associated with rather persistently contracting fields of vision which lately have indicated a special interference in the left tract or radiation. The patient's pulse is rapid, and the signs of general intracranial pressure are absent. The condition, then, of the optic nerves in association with the loss of pupillary reflex on the right side, the disturbances in the sixth nerve, and the fifth nerve on the left side indicate a basilar lesion which has involved primarily the sixth nerve, then, the optic tracts, more especially of late the left optic tract, and more lately the fifth nerve. The nature of the condition is difficult to determine, though in all probability we are dealing with a low grade basilar meningitis or gummatous tumor in this region. The X-ray shows an enlarged sella. It seems probable, however, that the disturbance is located posterior to the hypophysis. One must consider the possibility of an internal hydrocephalus associated with this condition, and it is possible that this is causing an exaggeration of the symptoms.

In the event of specific treatment failing, an exploratory craniotomy is advised with the possibility of having to fall back upon a palliative decompression for the relief of the optic nerve edema.

The two cases following are given in brief and are interesting in association with the considerations given under case three.

Case XV.—Contusio Cerebri. Post Traumatic Epilepsy. Osteoplastic Flap. Recurrence. Exploratory Craniotomy Under Advisement.

W., aged 29, of Calhoun, Ga. Patient of Dr. Shellhorse, and referred by Dr. Lewis Gaines.

Three years previous patient had a severe injury to the head. Four months afterwards first epileptic attack. Three attacks in the next four months. X-ray indicated a suspicion of slight fracture of the right side. An osteoplastic flap of the right frontal region was evidently turned down and replaced. Patient did not know what was done at operation. Attacks have recurred of late, and a report after the patient's visit to the office indicated from a recent attack that the lesion was situated on the left side of the head. This patient will

be under observation, but the condition up to the present suggests an injury to the brain on the opposite side from the supposed fracture.

Case XVI.—Contusio Cerebri. Post Traumatic Epilepsy of the Jacksonian Type.

H. C., aged 15.

Patient at the edge of four fell striking the right side of his head. At the present there is a linear scar over the parieto-occipital region. The accident was associated with unconsciousness for two days. Slow recovery. Seven years later, patient had first attack of epilepsy. These are persisted up to the present time at irregular intervals. His father says that the attacks are principally on the left side, and that the left arm is lifeless after the attacks. There is distinct pain nearly all the time in the left arm which has increased by motion or pressure, and suggests a central condition. There is a definite hyperaesthesia over the left arm and left side of the body.

Taken as a whole this case represents fairly definitely the after effects of injury to the right parietal region. A craniotomy was refused.

We must fully realize that the symptoms of physiological disturbances often come long before the final degenerative processes, and serve as a warning for relief without which irreparable damage may ensue. With a careful realization that the earliest symptoms of lesions in the nervous system are much more important to us as far as cure is concerned than the projections of destructive disturbances, it is hardly necessary to emphasize the necessity of a patient and thorough examination in order that we may arrive at diagnoses at the stages in which permanent cure rather than temporary relief may be afforded.

No. 405 Candler Building.

Toxemia: Some Points on Etiology and Symptoms, With Deductions.

By Dr. C. G. Roehr, Ft. Pierce, Fla.

Food rendered toxic by any artificial preservative will cause toxemia. The symptoms of such toxemia develop so slowly as to be difficult to recognize and trace to their etiological factor. Most of these symptoms consist of marasmus, indigestion, asthma, atony, degeneration and debility. We can state positively that a chronic supply of the salts of tin, lead, copper, alum, borax, etc., will cause these symptoms of mal-nutrition and increased susceptibility to infection.

Food containing toxine or ptomain will produce symptoms of toxemia in such a short time as may be necessary for absorp-

tion, (as would be the case with a toxic dose of strychnine or alcohol). If this does not cause death in a few hours we have only the danger of debility remaining. Cooking will not destroy all toxins or ptomains.

Food containing living infection, when ingested, may cause infection in the digestive tract; yet by such slow production of toxine or ptomain, symptoms may not be developed for days, weeks, or even months. (We feed babies tubercle infected milk but cannot prove they have tuberculosis for from three months to three years). Cooking will kill infection.

Improper preparation, even without adulteration, of food causes unbalanced diet toxemia. We have learned that the carefully milled cornmeal may cause pellagra, while cornmeal containing hulls and germs will benefit such cases. Rice, even, when beautifully cleaned, may cause beriberi,—curable by eating rice hulls or bran. Our glorious white American flour has branded us a nation of neurasthenics. One potent beneficial agent in relieving such trouble is the addition of bran and shorts to our diet. This is evidence that unbalanced diet causes unbalanced function toxemia. The food's seeming purity is its defect. Even freezing or boiling modifies food values extremely. Milk, the best animal extract known, adapted to supply every demand of the growing system, when boiled, is removed from its natural grade or class all-sufficient, to the class deficient.

Toxemia as a result of infection is generally loosely divided under the heads, acute and chronic. In the acute class the toxins are very soluble and rapidly absorbed as typified by tetanus, diphtheria pest, etc. Here we have typical symptoms produced by the toxemia peculiar to each, except when the system is overwhelmed by extreme intoxication. We then have complete inhibition of all normal function and loss of resistance, resulting in unbalanced cell activity, giving us septic auto intoxication. This may occur even in malaria, meningitis, scarlet fever or mixed infection. In this stage we lose our typical disease symptoms and may mistake any of this class for typhoid. Here the history should prevent error.

Chronic toxemia only modifies normal function. When complications occur we find tissue destruction, e. g., pellagra. Symptoms called rheumatism, eczema, benign endocarditis, even mental aberration, dropsy, epilepsy, neurasthenia, hysteria, etc., may have their etiological factor in infected sinuses of the head; in decayed teeth; or infection in various parts of the intestinal tract; in the urinary tract, or the

skin. Such infection may be bacterial, plasmodial, protozoan, even ordinary worms, including hookworms and flukes. (A very common form of this toxemia caused by parasites in the South, is the fissured tongue.) These symptoms are not found at the point of infection. These toxins may act on secreting glands giving us secondary auto-intoxication.

Distinctly differing from such toxemia is local infection, as malignant endocarditis, arthritis, neuritis, infective dermatitis, etc.

Heat toxemia is well known in the North as insolation, with its overwhelming effect, coma, delirium, convulsions, etc., caused by inhibition of function. In the south we have only chronic heat toxemia with slight modification of function as shown by linear ridges in finger nails; stained or bleached spots on skin; hyper-esthesia, atrophy, etc.

Auto-intoxication cannot be limited to unbalance in gland secretions because in the great majority of such cases the predisposing factor may be unbalanced diet, or unsuspected chronic infection, or any variety of chronic toxemia, even the unbalance of heredity. This variety is of especial interest as it simulates many other diseases. Hysteria to mania; blushing to urticaria; anacidity or hyperacidity; constipation or diarrhoea; a thyroid heart or suprarenalin skin; perspiration excessive or absent; temperature varying as much as ten (10) degrees; palpitation, etc. We know anger or grief may change a mother's milk to poison; cause a miscarriage or an attack of jaundice. We know that dis-use causes atrophy; moderation means perfection; excess results in degeneration. These physiological laws explain the necessity of knowing all we are doing when we modify gland function by the use of gland extracts. Here the law of mathematics is at fault and one and one may make one thousand, plus or minus, to benefit or injure.

At present we are glad to get our information on the use of gland extracts and drugs from the meat packer, dye-house, chemist, and the drug houses; and we are grateful for the literature they so freely send us.

War and epidemics by demanding immediate action are the crucibles for theory. They diffuse knowledge by publicity.

In time of peace, the charity hospital is our recognized field for clinical opportunity and study. What right have we to use our indigent brother for this study. Why pay to have our condemned criminals killed and waste this good material? Why please the commercial houses by testing their claims on our patients?

Team work by the politicians, rules the

world. Team work in religion, guides the world. The lack of team work in medical science is our deplorable disgrace and handicap.

In 1869, Dr. Nicholas Senn planted epithelionia in his own arm—by good luck, without effect. Today we know that some varieties will grow by transplanting. Where cancer is caused by protozoa, we know radium will cure. When blastomycetic, X-ray will cure. Seventy-five per cent. (75) we send to the surgeon because we do not know their etiology. Team work alone will aid us here.

Our State Health Board should be backed by every licentiate, thus enabling it to enforce preventive measures which are absolutely impossible today. Our government must appoint a commission of scientific medical men, an expert in each and every branch of our work. Commanding the necessary material, and with the continued assistance of the army and navy medical forces we can attain the degree of usefulness our science deserves. Such a commission would wipe out all fakes and prevent such crime as planting turtle tuberculosis in human beings for profit. Etiological questions could be settled without the necessity of the average doctor to try them on your baby or mine. They would never be able to replace the individual physician at the bedside where he must study each complication, but they by team work will supply us with definite scientific information—our lack today.

Human Plumbing—Amelioration and Cure of Chronic Intestinal Stasis.*

By William Seaman Bainbridge, A. M., Sc. D., M. D., New York City.

In the matter of human plumbing the field of the physician, the physical educator, the dietitian, the belt maker, and even the corset fitter, may be more extensive than is that of the surgeon.

Lane, the great leader in more than one department of medical and surgical science, has stated that nine-tenths of all cases of the condition to which he has applied the term "chronic intestinal stasis," would never reach the surgeon if proper attention were given in the line of rational prophylaxis and early treatment. I would go still further and say that perhaps nineteen out of twenty cases should be cured without surgical interference. There are, however, many cases in which, through neglect or

improper treatment, or from the presence of other conditions, intelligent surgery must be brought into requisition in order to forestall chronic invalidism, or to obviate an unfortunate waste of time and even the sacrifice of life.

It is a deplorable fact that in the majority, if not in all cases of chronic intestinal stasis which reach the surgeon today, the patient is a physical and nervous bankrupt, and a very poor surgical risk. A better understanding of the mechanical causes of the condition must, it seems to me, lead to a material decrease in the number of severe cases which eventually reach the operating room.

Before the Western Surgical Association, at the meeting held in St. Louis, in December, 1913, I described fully the various "bands," "folds," and "veils" which are concerned in the production of chronic intestinal stasis, and discussed the different theories as to their etiology. These causes, according to different observers, may be

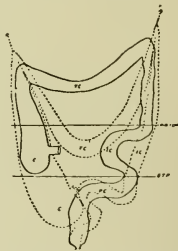


Fig. 1. Represents the several variations from the normal which the large bowel undergoes. The normal condition is shown as a firm outline, and the altered condition as a dotted outline. Note the prolapse of the cecum and transverse colon, the telescoping of the iliac colon and the elongation of the pelvic colon. (BTP) indicates the brim of the true pelvis. The hepatic and splenic fixures are drawn up and kinked by the development of acquired resistance shown by arrows.

classified as (1) Congenital; (2) Inflammatory; (3) Evolutionary; (4) Essential Patency of the Ileocecal Valve; (5) Internal Secretions.

Without discussing the relative merits of the different theories concerning the etiology of these adventitious intra-abdominal structures, I may say that the mechanical or evolutionary theory of Lane seems to me the most plausible, and the one which most nearly accounts for the various conditions

*Stereopticon clinic, illustrating different phases of chronic intestinal stasis. Presented before the Medical Society of the State of North Carolina, at Raleigh, June 16, 1914.

found in the study of cases of chronic intestinal stasis. It is therefore to the significance of the "evolutionary bands" described by Lane that I would direct particular attention on this occasion.

The doubt which, eight years ago, existed in the minds of the majority of surgeons concerning the existence of these bands seems to have been completely dispelled by the continued brilliant work of Lane, and by the efforts of those who have followed

underlying cause or causes. At the same time, naturally, he was working in the opposite direction, from the abnormal intra-abdominal manifestations which have come, carelessly, and without his approval, to be known as "Lane's bands," and "Lane's kinks," to the possible pathological effects produced by these.

Thus, by recognizing the existence of

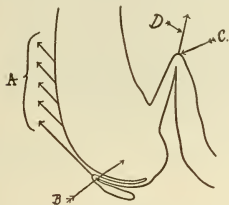


Fig. 2.—(A) Jackson's membrane, the lower part of which involves the appendix. (B) The distended loaded cecum. (C) Ileum kinked by band (D).



Fig. 2-a.—(A) Jackson's membrane. (B) Multiple Lane's bands. (C) Lane's kink. (D) Appendix caught in bands. (E) Thickened part of mesentery forming a strong band.

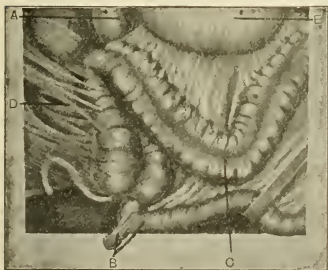
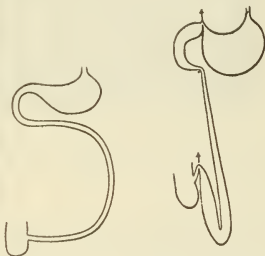


Fig. 2-b.—(From B. M. J., Nov. 1, 1913.) (A) Dilated duodenum. Angulated duodeno-jejunal junction. (B) Lane's band and kink. (C) Prolapsed transverse colon. (D) Jackson's membrane. (E) Gastric dilation.

his lead in the study and treatment of these cases.

The dominant idea which Lane has ever had in mind in studying the cases which have come to be known under the diagnostic term of chronic intestinal stasis, was to work back from the widely divergent manifestations which we now consider to be the symptom-complex of stasis, to the



Figs. 3 and 4.—(1) Normal condition of stomach, small intestine and cecum. (2) The several changes which result from ileal obstruction.

these pathological structures within the abdomen, studying their pathogenesis, tracing their relationship to a wide variety of pathological manifestations, and developing a system of preventive and correctional measures, Lane has pointed the way to a new field for exploration, a new territory for useful endeavor.

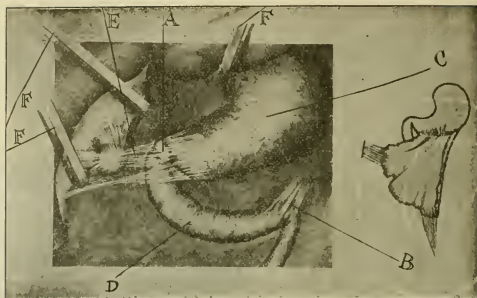


Fig. 4 a.—(A) Kinking at pyloric outlet. (B) (E) Bands to gall bladder. (F) Retractors Duodeno-jejunal kink. (C) Dilated stomach. holding up liver.

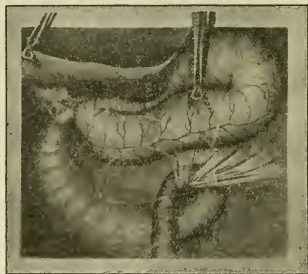


Fig. 4 b.—Another illustration of practically the same conditions shown in Fig. 4 a. Only more marked and loop of jejunum thrown to the right.

Having worked with him on my various visits to London for several years, having studied his cases before, during, and after operation, having repeatedly seen his hypothesis with reference to the existence of these causative factors in the production of chronic intestinal stasis verified upon the operating table, and having substantiated his findings in a large series of my own cases, I have tried to follow his example in studying these conditions as a whole, and not fixing attention upon this or that particular point. It seems logical, therefore, to consider all these abnormal intra-abdominal structures, whatever their origin, or their situation, as parts of the great whole,

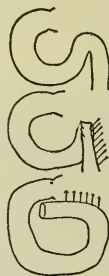


Fig. 5.—Normal curve of duodeno-jejunal junction.

Fig. 6.—Angulation of duodeno-jejunal junction produced by bands.

Fig. 7.—Nature's efforts, by the formation of bands, to prevent angulation.

as possible factors in disturbing the body drainage in the production of chronic intestinal stasis.

According to Lane's theory, in the erect posture assumed by man, there is a general tendency to vicerptosis. This dropping of the abdominal organs gives rise to stress and strain upon the mesentery and its attachments, in certain directions, and nature attempts to offset this state of affairs by the formation of practically bloodless, "evolutionary bands," for the purpose of supporting the viscera and preventing the



Fig. 8 a.—(A) Appendix caught up by band. (B) Retractor holding up ileum. When ileum is allowed to drop over appendix, the condition shown in Fig. 8 results.



Fig. 8.—"Appendiceal Tie," with ileum kinked above by the appendix, and distended below.

ptosis. In this instance, nature's plan has miscarried, to a certain extent, and in the process of development, the unequal strength of these evolutionary bands in different parts leads to unequal support throughout.

As a consequence of this unequal support, the bowel is held up firmly at some points, and is allowed to sag at others. The result is an angulation or kinking at the point of support.

The basis of intestinal stasis, therefore, is a mechanical one, the chief factor of which is the abnormal fixation of a given point in the length of the intestine, with a dropping of the tube on either side of this fixed point, thus producing a kink.

It is with these mechanical changes, without regard to whether they are hereditary, congenital, "toxic," or "evolutionary," that surgery has to deal.

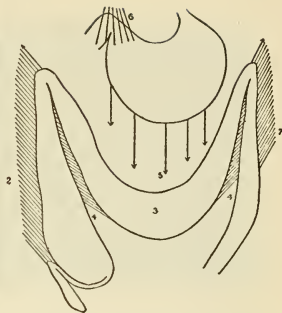


Fig. 9.—(1) Represents the prolapsed cecum; (2 and 7) the crystallized resistances which tend to oppose the downward displacement of the large bowel and sustain some of the weight of the transverse colon transmitted through the crystallized resistances (4); (3) the transverse colon; (5) portion of the weight of the transverse colon transmitted through the great omentum to the convexity of the stomach; and (6) the acquired ligament that secures the duodenum and pylorus to the under surface of the liver and gall-bladder.

The more severe types of cases, those which call for surgical interference, may be classed according to the particular part involved and the treatment required, as follows: (1) Misplaced appendix; (2) Ileal kink; (3) Duodeno-jejunal kink; (4) Kinking at the sigmoid loop; (6) Kinking at different points, extreme cases, with many bands and diverticulitis. These are briefly considered.

Misplaced Appendix.—Displacement and kinking of the appendix sometimes occurs, particularly in the presence of "cecum mobile." In such cases the appendix acts as a ligament, twisting the cecum and pulling it inwards as it descends. The cecum, in these cases, should be anchored in proper position. The stasis which results from slight misplacement and kinking may be relieved by the removal of the appendix and the correction of the kink. In severe cases, in which the kinking of the appendix is associated with kinking of the ileum, the symptoms are relieved by the removal of the appendix. In many of these cases the evolutionary bands extend from the ileum to the base of the meso-appendix. The cutting of these and the correction of the resulting kink will effect a cure after appendectomy has failed. The possibility of the

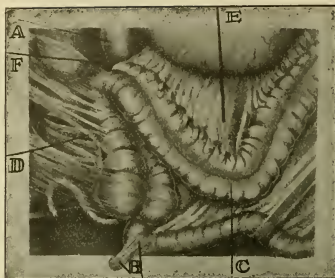


Fig. 9 a.—(From B. M. J., Nov. 1, 1913) also Fig. 2 b.—(A) Dilated duodenum. Angulated duodeno-jejunal junction. (B) Lane's band and kink. (C) Prolapsed transverse colon. (D) Jackson's membrane. (E) "Portion of the weight of the transverse colon transmitted through the great omentum to the convexity of the stomach." (F) Acquired ligament securing duodenum and pylorus to under-surface of liver and gall-bladder.

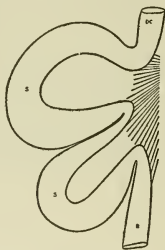


Fig. 10.—Fixation and obstruction of sigmoid.

existence of these evolutionary bands should be borne in mind in all cases of appendicitis, especially of the so-called chronic type.

Ileal Kink.—Kinking of the ileum at different points along the course of the terminal coil may be caused by evolutionary bands. In uncomplicated cases, where the kinking is of slight degree, relief may be obtained by the simple cutting of the bands transversely and sewing up longitudinally. Very broad bands are sometimes found, giving rise to marked angulation and very pronounced stasis. In these cases severing the bands, with or without plication of the

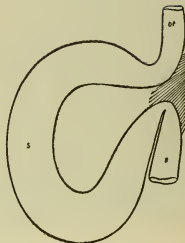


Fig. 11.—Diverticulitis of sigmoid produced by approximation of two ends of loop of sigmoid.

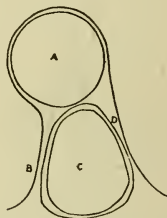


Fig. 11 a.—(From Medical Record, Sept. 27, 1913.) (A) Band Holding in approximation two ends of sigmoid loop, causing a diverticulum.

upper surface of the mesentery, does not rectify the condition. Ileo-colostomy or ileo-proctostomy may be necessary.

Duodeno-jejunal Kink.—Kinking of the duodeno-jejunal junction is usually secondary to ileal stasis. The first part of the duodenum becomes greatly distended, the second and third parts being less affected. Adhesions about the pylorus, with more or less marked kinking and obstruction of this part of the alimentary tract, may complicate such cases. This is always to be borne in mind in suspected cases of cancer of the pylorus.

Correction of the duodeno-jejunal kink may be accomplished by the division of the bands and the placing of the upper part of the jejunum against the under surface of the transverse meso-colon. In the event of



Fig. 12.—(A) represents the colon in transverse section; (B) the original mesentery; (C) the cystic ovary lying free in a cavity; and (D) the remains of the acquired adhesions.



Fig. 12 a.—(From Medical Record, Sept. 27, 1913.) (A) Band in which stump of tube and ovary is caught.

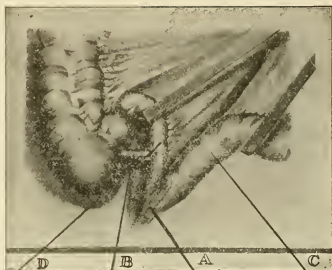


Fig. 13.—(A) Lane's band and kink. (B) Appendix caught behind. (C) Dilated and thickened ileum. (D) Collapsed and thinned ileum.

verted into a short, straight tube by bands extending from the peritoneum external to the meso-sigmoid. This tube crosses the iliac fossa obliquely, being only partially covered by peritoneum. Lane holds that this condition is found almost exclusively in tuberculous subjects. It may be corrected by anastomosis between the ileum and the beginning of the pelvic colon.

Kinks at Different Points, extreme cases, with many bands and diverticulitis.—Colectomy is indicated in such cases.

In some instances, particularly in female subjects, ileo-colostomy, or short-circuiting, is deemed by Lane to be a safer procedure than the cutting of bands. In a certain proportion of cases in which ileo-colostomy has been performed there will be an eventual recurrence of the symptoms of stasis, and colectomy will have to be resorted to in order to effect a cure.

By the recognition of the existence of evolutionary bands and resultant kinking and angulation of the drainage tube, and by the institution of the proper medical or surgical corrective measures, many patients may be saved from becoming "human wreckage," while others who have reached this deplorable condition may be practically "made over" by resorting to the more radical operative procedures.

The illustrations (reproduced from the Transactions of the Western Surgical Association, Dec. 19, 1913) show Lane's diagrammatic representation of the various conditions found in chronic intestinal stasis, and drawings of the author's verification of these in actual cases upon the operating table.

obstruction to the pylorus it is sometimes necessary to resort to gastro-jejunostomy.

Kinking at the Hepatic and Splenic Flexures of the Colon.—Milder degrees of obstruction and stasis in these cases may be, according to some operators, relieved by omentopexy. In more severe cases, when other measures have failed, colectomy may be employed with success.

Kinking at the Sigmoid Loop.—Evolutionary bands may form in such manner as to bring together the two ends of the sigmoid loop. The mobile loop may be con-

Is Pellagra Due to an Intestinal Parasite?

By B. W. Page, M. D., Health Officer, Robeson County, Lumberton, N. C.

I wish to report to the medical profession an animal parasite found in pellagrin feces. The parasite appears in six different forms, only one or two forms noticed in most specimens examined. The first and most frequent form is that of a very small black organism, oval in shape which develops into the second form that of a coccus which is light in color and has a distinct capsule. This form is about one-thirtieth as large as an amoeba. The third form is an elongation of the second into a club shape. Fourth, a bacillus developing from the second and third. Fifth, a spirilla, developing from the second, third or fourth of the first form. In all these forms the parasite is motile and the development from one form to another has been seen. Only in advanced cases of pellagra that have had very little treatment do we usually see all of the above forms.

The parasite has been associated with severe cases of dysentery for the past three summers, two of these cases having died later of pellagra. It has been found in the feces of a second case of pellagra developing in a home before any clinical symptoms except dysentery developed. I have found the parasite in twenty-three different cases of pellagra examined. Repeated examinations of feces of healthy individuals lead me to believe that the parasite is not an inhabitant of the normal intestine.

An Ally Worthy of Confidence.

It is going on toward 20 years since Gray's Glycerine Tonic Comp. was first placed at the service of the Medical profession. During all this period Gray's Glycerine Tonic Comp. has maintained the standards that first attracted attention and the busy practitioner has ever found it an ally worthy of confidence. It never disappoints and in the treatment of atonic conditions, particularly of the gastro-intestinal tract, it is often the one remedy that will produce tangible and satisfactory results. The physician who does not use it in his practice is denying his patient many benefits that can be obtained in no other way.

Cerebellar Abscess; Operation; Recovery.

Milligan reports the case of a male aged 15 years, who was first admitted to the Royal Infirmary, Manchester, April, 1909, with both ears discharging. Radical operation upon right ear; local treatment ad-

vised for left ear. Readmitted November 10, 1913. Right ear perfectly well; antrotympenic cavity completely epidermized. For past three weeks had complained of severe headache, mainly frontal. Had felt sick but had not vomited until day before admission. Had been very constipated. Patient quite rational, but cerebration slow. Temperature, 98.2 deg. F., pulse 66, respiration 18. No paralysis. Knee-jerks exaggerated, equal. No Babinski. Marked ataxia. Tendency to fall forward. Dysdiadochokinesis present. Pupils equal and dilated. Optic neuritis (?). Nystagmus on looking to left (affected side). Left auditory meatus full of dense polypoid tissue and pus. It was impossible, therefore, to make a complete labyrinthine examination. Diagnosis: Left cerebellar abscess. Previous to operation 4 drams of cerebrospinal fluid were withdrawn; it was clear an under pressure. Operation: Radical mastoid. Opening made through posterior wall of antrum; cerebellar dura exposed; incised. An abscess containing a little over 1-2 ounce of pus was evacuated. Drainage by means of rubber tube. Bacteriological examination: Almost a pure streptococcal infection; a few staphylococci present.—Proceedings of the Royal Society of Medicine.

Double Intranasal Dacryocystotomy for Lachrymal Disease.

Paterson reports the case of a girl aged 16 years. "Watering" of both eyes noticed for three years. She had been treated two years ago for atrophic rhinitis, which was still present. About five weeks before admission phlegmon appeared over the left lachrymal sac with the formation of an abscess or fistula. On the right side there was a blenorrhea of the sac, a quantity of thin pus being evacuated on pressure. West's operation of opening the sac from the interior of the nose was done on both sides. On the right side the sac wall was overlapped by an affected ethmoidal cell, which was opened up; on the left it was necessary to resect the upper part or the septum in order to get room. The result of the operation was immediate and the fistula closed. The case illustrates (a) some conditions of the tear-sac brought about by stenosis, viz., blenorrhea of the sac, dacryocystitis, phlegmon, and fistula, and their dependence often upon a nasal affection; (b) the intranasal conditions usually met with in the operation; and (c) the advantages of the intranasal route to the lachrymal sac.—Proceedings of the Royal Society of Medicine.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR
CHARLOTTE, N. C.

THE DOCTOR OR THE DRUG.

As no one with less power than that accorded to Christ could fill all demands as a physician, it is easily seen how deficient the best of us are. Further, the vaccinations of most illnesses offer such splendid opportunities for self deception in regard to efficacy of treatment that even the most skeptical cannot but often be led astray in judgement of cause and effect. Knowing that this is true why should we not boldly proclaim it, together with the limitations of known treatment especially the simplicity of our tools and thus avoid all danger of being classed with those charlatans, who, from Aesculapius and Cagliostro down to the scions of the latest cults licenced by our state legislature, have offered specifics for everything.

Such pretense are largely responsible for the belief entertained by the majority of the public that the medicine is the thing, and that the doctor is only a useless expense that lies between the sick and the needed remedy. Thus prescriptions are borrowed, druggists and patent medicine venders sought for an inexpensive shortcut to health, which, as often as not, appears, in the eyes of the sufferer at least, to do as much as regular medical treatment. No wonder the doctor's bill is the last to be paid, and my lady, compelled by financial stress to choose between a new gown and much needed medical care, buys the gown and turns to a nearby counter for a bottle of Sarah Simple's Sick Specific in absolute confidence that she has actually saved!

Would not all this be changed if the public were taught that it is the doctor and not the medicine, that at least the tools without the craftsman are more apt to injure than to cure, and further, that neither divining-rod, talisman, nor obscure nor complicated methods are competent, but that utensils as simple as those of the journeyman-carpenter all that science with the distinctness of all its precepts, has so far placed in our hands do all that human power yet controls in the way of treatment, provided they are wielded by skillful hands!

SAVING SEVERED FINGERS.

Everybody has met the newspaper accounts of how a finger or a toe has been severed, immediately replaced, and union followed. Somewhere in the dim recesses of our memory a cell has registered and stored the tale of such an accident where a finger-tip was cut off, and swallowed by a chicken; the fowl was slaughtered, the finger-tip rescued, reunited to its base and lived.

Did anybody ever really witness such a marvel? Has any reader of this Journal had such an experience?

We ask because in one of our French exchanges a writer, discussing wounds of the finger states that he has always reunited severed members, but never yet has he succeeded in obtaining union. This has also been our own experience, although when there was ever so small a shred of tissue remaining uncut, the union has been secured and the member saved.

Dr. Graham gives us in the journal for August a fine resume of the general principles governing the treatment of wounds of the fingers, which makes an excellent introduction to a discussion of this important practical subject.

What would be the best general line of management to secure union in such cases? Is antisepsis the main object, or is it the preservation of life in the severed part? What are the best means of meeting this need.

The maintenance of heat in the affected parts is of first importance. Hyperemia is to be secured by the best means at hand. Antiseptic dressings are always depressing to the vitality of the tissues with which they are in contact. Many years ago a preparation of blood was advised as a dressing for chronic ulcers, where it was desired to enhance the vitality by local feeding. Is there any better dressing here than the exuded blood itself? Do we harm or good by cleansing it away? Would nuclein be advisable as a means of securing this local nutrition? Would the Bulgarian bacillus be useful in combating pathogenetic microorganisms here, as well as in the alimentary canal?

This, last thought may be important. One case has been published where this organism, applied to a chancroid, accomplished a cure quickly when the ordinary applications, including fuming nitric acid, had failed.

Not long ago it was remarked that surgical technic had been so perfected that the surgeon was compelled to turn for further development to study the physiology

of the tissues and organs, and learn to apply this knowledge to supplement his mechanical applications for the mechanical abnormalities. It is evident that progress is yet possible, and that many problems remain for the capable investigator to solve.

More than this, there is a wide field for the individual investigator, and for the clinical observer, apart from the laboratory man and the hospital staff. In truth, the latter are only the forerunners; the final verdict in every case must be rendered by the individual practitioner; for methods and remedies that are only applicable in special institutions are not those that meet the needs of the profession at large.

As an instance of this truth, take the administration of anesthetics. The magnificent results obtained with ether in the service of the Mayo clinic, are familiar to us all; but who could expect the average country practitioner to rival them? An Iowa surgeon, Dr. L. W. Littig, collected data regarding the use of chloroform and ether by physicians of that State, and uncovered nearly 100 deaths following their employment.

Nevertheless it would be absurd to deduce from this the conclusion that anesthetics and the operations involving their employment should be limited to the great city institutions and surgeons that would have shut out the Mayos a few years ago. The country practitioner must operate when and how he can. A woodchopper cuts his foot half off with his ax; he would die before he could be brought to a hospital; a tree falls on a passer by; a man falls against the circular saw in a mill; any one of a thousand accidents, occur unique, and for which the text-books give only general directions, and the surgeon must act at once on his own judgment. Verily, we may be organizing into a closely controlled socialistic community, but the day for individualism is far from being past.

RAISING CHILDREN.

Many times in our earlier years we have criticised the manner in which this or that pair of parents raised their children. They never exhibited sufficient firmness, and always erred on the side of undue indulgence and too little control. The children were spoilt; unrestrained; froward; and exhibited all the faults seen in them by persons who had none of their own.

As years brought experience and, we hope, wisdom, we began to think of this matter from the standpoint of the child and not of our own selves. We realized that we had been considering the little ones with the idea that they should be allowed

to annoy us, and not with the thought of studying the child, his needs, and the meaning of his actions.

But it was not our own gray matter that worked out the problem and let in the light, but that great thought-inducer Darwin, who awaked in us this train reasoning.

The statement that every child in the course of its development goes through all the stages through which the human race has passed in its progress from nomad to its present promise of civilization, gave the key.

The infant, yet a nursling, clings to the bough with a grip whose strength is an inheritance from its tree-climbing ape ancestors. The same child, a few years older, builds its first habitation among the treetops; and the boy's proclivity to climb is not cussedness or a desire to terrify his mother, but still a tree-dweller's instinct. His first weapon is a good strong club; then he fashions bow and spear of wood, the latter with point hardened in the fire. Later he digs himself a cave, and every year some Chicago boys are smothered in the sand from which they seek to excavate a troglodyte dwelling.

By exercise and athletic competitions they develop that strength and skill which made the life of the savage safer. Yes, and when the neighbors complain of the boys' raids on orchard and melon patch, remember that the robber was on stage of development, and they unconsciously practise his arts. Many a man fails to develop the respect for property that has come quite late—see how the European anarchists, after a few stormy years here, settle down into law-abiding citizens as they accumulate property for themselves.

Before we condemn our boys too severely, ask ourselves if we do not still know that reversion that speaks of our nomad ancestors, when we recreate with rod and gun; when we hic to the woods and camp out. What else is the charm if not that of reversion, and relaxation from the bonds of too strict civilization?

The doors of Janus' temple have just been thrown open; the battle call has been given, and all over the world the ardent youth responds. Don't talk of patriotism if the one side will not accept our services we'll apply to the other—but we just got to get into this scrap! The man who defends war is a monster—the man who won't feel the call to arms is a mollicoddle. Reversion purely.

Revenons a nos boys—What we term discipline is too often merely seeking to warp and twist them into unnatural channels. We determine that the son shall fill our own shoes, take our place as we grow

old—and so we train him up to be a doctor—out as the boy, and he tells you he hates it all, and wants to be a stock man.

There is one woman has a small family, and everybody agrees that she has no government at all. She finds the children an unending source of amusement—just laughs at all they see or do, and loves them. They are developing into perfectly natural children, with all the faults they should have; say the awful things such children do; act as natural children should. Their relatives' personal peculiarities—bald heads, red noses, amputated legs, wrinkles—are discussed with disconcerting frankness. Why not? Would you prefer that they should at this early age learn to conceal their thoughts and smother the spirit of inquiry?

Study the actions of children and you will find a legitimate reason for everything they do, if you apply the evolutionary test. Do not be in a hurry to punish, and you will not develop the art of lying. Their faults, such as greed, selfishness, etc., are better treated by their companions than by yourself. The other boys may be trusted to eradicate any streak of yellow. A thief, a liar, a coward, a bully, gets from his fellows the sort of discipline future life gives us men.

Booth Tarkington's Penrod Schofield stories should be collected and used as a textbook by every father of a boy. They are classic in their insight into boy-character and father-dumbheadness. Not but that a boy does need the rod occasionally, but too often it is merely an evidence of the parents' failure to comprehend the child, that leads to this last resort. Many a hiding the writer merited in his youthful days; but of those he got scarcely one was really deserved. The sense of justice is highly developed in boys, and undisciplined punishment rankles long in their minds.

GOOD HEALTH AND LONG LIFE.

Self preservation is the most deeply implanted of all instincts. Ever since the origin of life living things have been constantly fighting against disease and those forces of Nature that tend to destroy them; they have been struggling to acquire and retain those bodily powers and characteristics that promote health, strength and longevity. They have contended against powerful odds and surrounded as they have been by the darkness of ignorance and superstition their efforts have often ended in disaster and failure. Men have fallen down before and defied the forces of Nature that were destroying

them instead of investigating and finding out the laws which regulate these forces and directing them to their own benefit. All down through the ages we behold men building temples and offering up sacrifices to conciliate their offended deities. We see them relying on incantations and charms to ward off or stay the progress of plagues, pestilence and death when they should have been exerting themselves to find out the cause of their troubles and by correct living and proper sanitation stamp them out when they did occur.

The tendency of human beings to attribute their calamities to super-natural causes has filled the world with disease, suffering and death.

The human body is controlled by natural laws just as inexorable as the laws of gravitation and violation of these laws is just as surely followed by trouble in the one case as in the other; if a person falls from a high building or is run over by a train or an automobile you naturally expect him to be hurt; if he gorges himself at a thanksgiving or christmas dinner, gets drunk or violates the laws of health in some other way he will just as surely injure himself even though the results may not be so plain or the punishment so swift.

CLIMATE TREATMENT.

It may be regarded as settled that elevated localities, where pure air is found in altitudes from 1800 to 2000 feet above the sealevel, is not only the best place to stay pulmonary tuberculosis, but in one inheriting such tendency, it is a certain preventive of its development.

Phthisis is rare in the Swiss Mountains and why should it not be rare in the dimbalsamic regions of North Carolina and in the high altitudes of the Rockies.

According to observation ten to twenty per cent on altitudes of 1000 feet; five to ten per cent on altitudes of 2000 feet; two to five per cent on altitudes of 4000 feet; and one to two per cent on altitudes of 6000 feet. There is seldom a case above the latter point. This is conclusive as to the almost entire immunity in higher altitudes. Still there are properties in the atmosphere in some high altitudes, such as rigorous cold, that are not found in the high places in North Carolina. Patients can sleep in the open nearly the whole winter in Southern altitudes while they cannot do so safely in the Western country.

Our urban population is increasing at such a tremendous rate that it is no wonder that tuberculosis makes such fearful ravages. It is a well known fact that people living in rural districts where there is

plenty of elbow room and an abundance of pure air are comparatively exempt from tuberculosis. And it is certain that those living in mountainous regions are very rarely so afflicted.

OUR SYMPATHIES?

Somebody—quite a number of somebodies in truth—asks us where are our sympathies in the great European war. We answer:

Our sympathies are with the Belgians—an innocent, unoffending people, whose only fault has been their weakness. For this and this only they see their fertile fields devastated, their cities ruined; their noble edifices, the relics of an architecture that the world has revered for many centuries, now made masses of crumbling ruins; their men dragged from their busy hives of industry and compelled to take up arms to defend their homes; their women widowed, their children orphaned; the arts and industries that make Belgium the busiest workshop of Europe suspended, while men shoot and stab each other.

Our sympathies are with the German people; and the French people; and the Russian people; and the Austrian peoples; and the English people; and the plucky little Japanese; and the Servians; with all those races that have paused in the march of civilization, and devoluted into the stage of violence, of force, of murder, and rapine, and destruction, and a letting loose of all the evil passions that we have been so long endeavoring to eradicate or to hold in check.

'Scratch a Russian and you find a Tartar.' Yes, and loosen the bonds of restraint, imposed not by law or force but by education, and the developmental processes acting on the human species, and you uncover the savage. A dog-fight draws the men from lecture, theater, opera or even from church.

Every human being contains within himself the possibilities of a Jekyll and of a Hyde. We can develop the one or allow rein to the other; and as either increases the other shrinks. The same is true of the collections of men known as nations and governments. Let the thoughts and energies of nations be for many years concentrated upon the development of their armies, and it is a question of time when they will feel themselves irresistibly impelled to put their armaments to the test of war.

Then the Pandora's box of evils is opened. Men are brutalized; women are degraded; violence, crime, poverty, want, greed, disregard of law and loss of sympathy for suffering, the desertion of schools

and workshops for the camp and the outlaw's retreat, follow. The ideals toward which the youth strives are replaced by primitive types. The figure that looms largest in the public eye is the former bandit, now the successful leader of armies, in more countries than Mexico.

The structure of civilization is shattered, the marle of the race is debased, the course of that upward progress that means everything to our posterity is turned backward. *Vive la Force. A bas la justice*, and right, and mercy and love. The bigger the brute, the greater the man. Weakness has to descend to guile, to trickery, to treachery, to keep alive. The altruistic sentiments perish, as they cause the death of their possessor. The generous, the merciful, the honest, the good, become the prey of the coarser and less scrupulous.

Our sympathies are with the American people, who find their business disarranged, their means of earning a livelihood reduced or cut off, the cost of living immensely increased, and they compelled to undergo an expense that is estimated at a billion of dollars, on account of this war in which we have not the remotest personal interest.

Finally, our sympathies are not in the slightest degree with the rulers of the warring states. Had all Europe been under Republican governments there would have been no war—there would never be another war. Wer call the kings and emperors and Czars safely tucked away with comfortable pensions and the peoples permitted to rule themselves, the outlying provinces allowed to say which flag they preferred to live under, the rights of man recognized, and the gigantic armies that absorb the life-blood of Europe reduced to the necessary police forces, we should see a state of things that might well be considered the millennium.

Not that war would cease. Europe must ever be the guardian of peace by her armies and navies. But united Europe could forbid the lifting of an arm in anger, the world over. With a republican Germany, associated with a federated Austria, backed by a friendly France and England, the Slav menace would become a chimera. With a free Russia associated with the smaller Slav races, backed by the rest of Europe, the yellow peril would be forever laid at rest.

Whether this is but an iridescent dream or can be made a reality, depends upon the degree of enlightenment to which the world may have attained. Should the war result in throwing the power into socialistic hands we may see a realization of the essential features. Socialism does not go to war.

SOUTHERN HEALTH EXHIBITION. AND MEETING OF AMERICAN PUBLIC HEALTH ASSOCIATION.

Jacksonville is to be congratulated on having secured the Forty-second annual meeting of the American Public Health Association which will be held in that city November 30 to December 5. This association is composed of health workers of this country, Canada, Mexico and Cuba and for the first time in its history will meet in one of the South Atlantic States.

Aside from elaborate preparations for the entertainment of the members present, extensive plans have been under way, for the past year, for the Southern Health Exhibition which will be held November 27 to December 6. Material from practically every southern health organization has been collected and it will be well worth a trip to Jacksonville to view the exhibits which will be shown there. The latest methods of southern health officials along the many lines of health work will be of interest to every progressive sanitarian.

Rural sanitation, pellagra, hookworm, bubonic plague, comparative race mortality and other problems of peculiar interest to southern health departments will be treated exhaustively while milk and water supply, waste disposal, laboratory work and special disease prevention will all be included. Much new material will be shown and not the least attractive feature will be the holding of a child's health conference in connection with an especially prepared exhibit bearing on southern conditions in rural and urban homes.

The program of the Association meeting has also been adapted largely to the interest of the southern members and several symposia on southern health problems have been arranged for. Altogether the occasion marks an important advance in the sanitary progress of the South and it is hoped that every community south of Mason-Dixon line will make sure of being represented by one or more delegates.

Organized preventive medicine has made such rapid strides during the past few years that except for such meetings and exhibitions many workers would lose track of the most recent sanitary achievements.

Editorial News Items.

The many friends of Dr. R. H. Lewis, of Raleigh, N. C., will be very glad to know that he has recovered from his long illness and has resumed his work which is confined to the eye, ear, nose, and throat.

The Supreme Court of North Carolina, in the case Johnson Versus Wilson County School Board, has just decided that an admixture of one-sixteenth part negro blood is sufficient under the North Carolina statute to debar a child from admission as a pupil to any public school for white children in this state.

The Sisters of Mercy at Asheville, N. C., have advertised for bids for the erection of a new general hospital in close proximity to the St. Joseph's Infirmary at that place. The new building will cost \$100,000.00, be of brick and reinforced concrete with cut stone trimmings, and will be fireproof. When completed (which it is expected will be in less than a year), this new hospital will provide an attractive addition to already numerous good places this famous mountain city has for the care of invalids and other afflicted sick.

At the State Hospital for the Insane at Morganton, N. C., on September 19 was held memorial exercises in connection with the dedication of a bronze tablet to the late Dr. P. L. Murphy, the first and for twenty-four years, Superintendent of the institution. The handsome tablet, the voluntary offering of admiring friends and former patients occupies a commanding position at the head of the stairway in the main hall and is artistic in conception and execution. The address on behalf of the donors was made by Dr. George G. Thomas of Wilmington, N. C., school companion and a lifelong friend of Dr. Murphy's, and was received for the Directors by Capt. J. P. Swayner, Asheville, N. C. On behalf of the hospital staff responses were made by Drs. John McCampbell, now Superintendent and I. M. Taylor, Superintendent of Broad Oaks Sanatorium, and a former associate of Dr. Murphy's on the staff. Justice W. A. Hoke of the North Carolina Supreme Court also made a brief address. A communication was read from Mr. D. A. Tompkins, Charlotte, N. C., tendering the institution an oil portrait of the late Jos. P. Caldwell, Charlotte, N. C., for 24 years Director of the hospital. Mrs. P. L. Murphy and the sons and daughters, with a number of distinguished medical men and other citizens were present.

Mr. Jesse Merrer Battle, formerly of North Carolina, who has for years been president of Battle and Company died at St. Louis, Mo., on the 16th of September.

Dr. Jno. S. Clifford, of Charlotte, N. C., will be married on the 21st of October

to Miss Mary Agnes Keely, of Nashua, New Hampshire. They will be at home in Charlotte after the first of January, 1915.

Dr. R. B. Epting, of Greenwood, was elected president for the ensuing term, Dr. G. F. Klugh, of Cross Hill, vice-president, and Dr. J. E. Pressley, of Abbeville, secretary. After the Association meeting, the Newberry doctors entertained the delegates at dinner at the Newberry Hotel.

Dr. C. D. East, of Clinton, S. C., died suddenly on September 20th after an illness of several weeks. At the time of his death he was staying with his sister, Mrs. W. C. Bell. His death was due to heart failure. Dr. East was a native of Laurens County. He took his medical course in the College of Physicians and Surgeons, Baltimore, Md., where he graduated with high honors. He was esteemed and loved by all the people among whom he lived. Dr. East was 62 years old.

On October 1st, Dr. Abner McLean, of Blenheim, S. C., passed away. He was in his eighty-first year and had practiced medicine for more than a half a century. Dr. McLean was a well read man and a very learned doctor. All of his friends will miss him.

Dr. A. A. Kent, of Lenoir, N. C., has accepted the Democratic party nomination in Caldwell County for the House of Representatives. Dr. Kent is well known to the profession having been an active practitioner and influential member of the North Carolina Medical Society for a number of years. He has served as member State Board Medical Examiners, President of the State Medical Society, and is now a member of the North Carolina State Board of Health. Dr. Kent served his county and the state as well most acceptably in the state legislature two years ago, and his return to that body will afford him further opportunities of valuable and helpful service to his state.

On the 24th of September the Third District Medical Society met in Newberry, S. C. The meeting was very interesting and well attended. The following program was carried out:

"Banti's Disease," Dr. G. P. Neel of Greenwood; discussion opened by Dr. G. F. Klugh, of Cross Hill.

"Ophthalmia Neonatorum, Prevention and Cure," Dr. G. A. Neuffer, Abbeville.

"Internal Secretions a Promising Field in Therapeutics and Diagnosis," Dr. G. F. Klugh, of Cross Hill.

"The Doctors' Sins of Omission," Dr. R. E. Hughes, of Laurens.

"Complete Inversion of Uterus," Dr. J. E. Pressley, of Abbeville.

"Treatment of Syphilis," Dr. J. D. Harrison of Greenwood.

There was also a paper read by Dr. J. L. Fennell, of Waterloo.

The Randolph County Medical Society held an exceptionally interesting meeting at Coleridge with Dr. C. A. Hayworth on the 29th of September. A paper by Dr. C. C. Hubbard, of Farmer, on Adenoids and Their Effects, and one by Dr. Hayworth on Symptoms and Etiology of Puerperal Eclampsia were especially interesting. This Society has been doing some good work for the last year. For some months they have been holding their meetings at different places in the county with the physicians at those places and usually the physicians there who were not already members joined. It seems to stimulate interest in the society. During the past year the membership has been larger, the attendance greater, and more interest manifested than has been for several years.

An unusual question of more than passing professional interest was before the Superior Court at Asheville, N. C., the last week of September in which a lady of Savannah, Ga., was awarded a verdict for \$10,000.00 damages against the Highland Hospital of that city. The claimant alleged that she was detained several days at the hospital when she, according to her sworn testimony, was in her own opinion sufficiently restored to health to have returned to her home or gone about at liberty as she pleased, hence her suit alleging damages to the amount as stated. The hospital has appealed the case to the Supreme Court. Certain it is that, if the higher court sustains the judgment of the lower tribunal, a new principle has been established in the practice of medicine and one to which it will behoove the medical profession to consider well. But it is hard to believe this decision will be permitted to stand in a court of last resort for to do so would be to assume that sick people, minors, inebriates, etc., etc., know equally well with trained medical men their needs and capacities, and this proposition no court

of sanity could hardly afford to judicially affirm.

The will of the late Dr. Wm. J. Young, of Barnwell, S. C., devises \$25,000.00 for the founding and maintenance of the Wm. J. Young Library Fund of the Medical Department of the University of Georgia at Augusta, Ga., and has been accepted by the trustees. The will also stipulates that the use of the library shall be available to physicians of the state of South Carolina and Georgia.

The North Carolina State Board of Health reports deaths from pellagra in the state during the year 1913 as follows: Total for the state, 173. Charlotte leading with 34; Raleigh second with 24; Goldsboro, 14; Durham, 12; New Berne, 9; Wilmington, 8; Greensboro 8 and Asheville 1. The remainder scattering, ranging from 1 to 4 per town.

BOOK NOTICES.

Rochester and the Mayo Clinic. By George Wiley Broome, M. D. The Shakespeare Press, 114-116 East 28th Street, New York, N. Y.

This little volume gives the history of the work of the Doctors Mayo in Rochester who are not only widely celebrated but are very popular with the people everywhere, a popularity which is approved by the medical press and carefully and solicitously fostered by the daily press. These men are noted for the cleanest work in surgery on record and by reading this book we see why and how. It is a fair and unbiased story calculated to aid physicians to greater cures and larger incomes.

Electricity in Diseases of the Eye, Ear, Nose and Throat. With illustrations. By W. Franklin Coleman, M. D., M. R. C. S., Eng. Ex-president of the Ophthalmological Society of Chicago. Professor of Ophthalmology in the Illinois School of Electro-Therapeutics, Chicago, etc. The Courier-Herald Press, 1912.

While electricity is now a recognized modality in the treatment of diseases and few medical offices are without some electrical equipment, it is also true that knowledge regarding its nature and application is by no means widely diffused. Literature on the subject is comparatively scarce, in fact, with most practising physicians, electricity is in the experimental stage.

The author has in this volume given us

the best thought of electro-therapeutists on the application of electricity in diseases of the eye, ear, nose and throat. The book is eminently practical. What has been accomplished and exactly how is what it tells. Cases giving conditions, methods and results, illustrate the writer's claim for electricity.

Part three treats of the therapeutic use of each and every electrical modality; while the balance of the book illustrates the various modalities in use, with history of cases and results.

Price, \$5.00.

The Clinical History in Outline. By Paul G. Wooley, S. B., M. D., Professor of Pathology, College of Medicine, University of Cincinnati, Director of Laboratories, Cincinnati General Hospital, Cincinnati, Ohio. St. Louis: C. V. Mosby Company, 1914. Price, \$1.00.

Every day we realize more the value of a thorough clinical history. It forms the basis of educational measures which will teach a patient how to avoid recurrences of a disease from which he is suffering and how to avoid sequelae of the disease.

In this volume the author has not attempted to take automatically a clinical history. The book is intended to serve as a reminder of points to be considered and also to offer a systematic scheme by following which a student may be enabled to arrange the facts concerning a patient in an orderly way. It is not intended to replace such volumes as McKisack's "Systematic Case Taking" but is modeled upon Strumpell's "Leitfaden f. d. klin. Krankenuntersuchungen."

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia and New York. \$6.00 per annum.

We are glad to announce that the September issue of this splendid series is out. The table of contents is as follows:

Diseases of the Thorax and its Viscera, Including the Heart, Lungs, and Bloodvessels. By William Ewart, M. D., F. R. C. P. Dermatology and Syphilis. By William S. Gottheil, M. D. Obstetrics. By Edward P. Davis, M. D. Diseases of the Nervous System. By William G. Spiller, M. D.

Artificial Parthenogenesis and Fertilization.

By Jacques Loeb, Member of the Rockefeller Institute for Medical Research. Originally translated from the German by W. O. Redman King, B. A., assistant lecturer in Zoology at the University of Leeds, England. Supplemented and Revised by the author. The University of Chicago Press, Chicago, Illinois. Price, \$2.50.

In 1909 the author published a book entitled "*Die chemische Entwicklungserregung des tierischen Eies*" in which he gave an account of his experiments on artificial parthenogenesis. The book has been translated into English by Mr. W. O. R. King, but owing to the new observations since made, the author found it necessary to revise and enlarge the translation.

The book gives a survey of the methods by which the unfertilized egg can be caused to develop into an embryo and the conclusions which can be drawn concerning the mechanism by which the spermatozoon produces this effect. The theory which the author published in 1905 and 1906, that at least two factors are involved in this process, namely, one which brings about a change in the surface of the egg, and a second, corrective factor, seems to explain all the phenomena observed in the new territory and has proved a reliable guide.

In developing the new field of investigation, the writer has selected those variables and methods which would lend themselves to a quantitative treatment.

The problem of fertilization is intimately connected with many different problems of physiology and pathology among which might be mentioned the natural death of the egg cell and the prolongation of its life by fertilization; the fertilization of the egg by foreign blood and the immunity of the egg to blood its own species, the relations between heterogenous hybridization and artificial parthenogenesis, between fertilization and cytolysis, and between permeability and physiological efficiency of acids and bases.

The Diagnosis and Treatment of Digestive Diseases. A Practical Treatise for Students and Practitioners of Medicine. By George M. Niles, M. D., Professor of Gastroenterology and Clinical Medicine, Atlanta Medical College; Gastroenterologist to the Georgia Baptist Hospital, Wesley Memorial Hospital, Atlanta Hospital; Consulting Gastroenterologist to the Anti-Tuberculosis Association, Atlanta, Georgia. With one colored plate and 86 other illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price, \$5.00.

The author's purpose in writing this book was to answer two questions for the busy general practitioner regarding gastrointestinal diseases, namely, "What is the disorder?" and "What should be done for it?"

Not only the general practitioner, but specialists in other lines, who find it necessary to keep informed in a general way concerning digestion and nutrition, will find this book very valuable. It contains first, concise, but easily intelligible descriptions of the various reliable tests for the objects of study in the gastric contents, intestinal juices, and feces; second, practicable and least disturbing methods of determining the position, size, motility, etc., of the stomach, intestines, and other abdominal viscera; third, a succinct statement of the diagnostic methods indicated in the recognition of digestive diseases; and, finally, an exhaustive discussion of both general and special therapy as applied to these diseases.

This volume contains 569 pages of text and a splendid index. As mentioned above there are 86 illustrations and one colored plate.

Report From the Department of Pathology and the Department of Clinical Psychiatry, Central Indiana Hospital for the Insane, 1911-1912 and 1912-1913. Volume V. Indianapolis: Wm. B. Burford, Contractor for State Printing and Binding, 1914.

This volume containing the reports of these two departments is quite complete and well arranged. The institution is to be congratulated upon being able to get out such a good report.

Leviathan, the Record of a Struggle and a Triumph. By Jeannette Marks. Hodder & Stoughton; New York: George H. Doran Company.

In this book of Miss Marks, she gives an arresting narrative of the greatest menace to the social life of America. It is the story of a peril peculiarly American—the record of a struggle and a conquest. She paints for us with a skillful pen the dangers of the drug habit, and the dramatic fight with the lower-self by which the habit may be broken. The novel is very human and intensely interesting. Price, \$1.35.

Infantile Paralysis. With Modern Methods of Treatment Including Reports Based on the Treatment of Three Thousand Cases. By Henry W. Frauenthal, A. C. M. D., Surgeon and Physician-in-Chief, New York Hospital for Deformities and Joint Diseases, and Jacolyn Van Vliet

Manning, M. D., Epidemiologist, Wisconsin, 1908, Epidemic Acute Poliomyelitis. Copiously illustrated with more than one hundred engravings, nearly all original. Philadelphia: F. A. Davis Company, Publishers. English Depot, Stanley Phillips, London, 1914. Price, \$3.00.

In this volume the authors have recorded their personal experience with acute poliomyelitis, its epidemic appearance, symptomatology, diagnosis, and methods of treatment. The manual is as free from technical terms as is possible in the discussion of a disease whose lesions involve the nervous system and the intricate function of the body which the nervous system initiates, co-ordinates, and directs.

The chapters on physical therapy and manipulative treatment are written in such plain language that the parents of a case may read what is needed for a child, and why. The spontaneous improvement which occurs in a certain percentage of cases may be augmented, deformities prevented, and cases with serious disability remedied, by the reasonable methods of treatment here outlined.

Outlines of Psychiatry. By William A. White, M. D., Superintendent Government Hospital for the Insane, Washington, D. C.; First Lieutenant, Medical Reserve Corps, United States Army; Professor of Nervous and Mental Diseases, Georgetown University, Washington, D. C.; Professor of Nervous and Mental Diseases, George Washington University, Washington, D. C.; and Lecturer on Insanity, U. S. Army and U. S. Navy Medical Schools. Fourth Edition. Revised and Enlarged. New York: The Journal of Nervous and Mental Disease Publishing Company. 1913.

The gross changes in this edition have been for the most part by way of elaboration and addition of new matter. Most of the new matter has been added in the chapters devoted to the description of the psychoses except that a chapter has been given to the Binet-Simon Scale for Measuring Intelligence. Numerous smaller changes have been made throughout so as to better express contemporaneous thought and in many instances illustrative extracts from case histories have been introduced.

This is certainly one of the best books on the subject and it has been a pleasure to look over it. The chapter on the Binet-Simon Scale is quite interesting.

Price, \$3.00.

The International Medical Annual. A Year Book of Treatment and Practitioners' Index. 1914. Thirty-Second Year. New York: E. B. Treat & Company, 241-243 W. 23rd Street. Price, \$3.50.

The average practitioner cannot find time to do all the reading he would like to and yet it is a fact that most of the recent advances in medicine and surgery first appear in medical journals and sometimes never elsewhere. The Annual gives in concise form a review of all these journals and at a price that is next to nothing in comparison with what would be the original cost of the journals, not to mention the time saved.

The Annual is alphabetically arranged and thoroughly indexed so that the contents is always most easily accessible. During the past year some of the subjects which received particular attention were, Thorium and Mesothorium, Tuberculin in Treatment, Malingering and Its Detection, Suggestion in Treatment, Serum Diagnosis of Pregnancy, Pellagra, Cancer, and Ionic Medication. All of these are dealt with quite fully in the Annual but not at the expense of other subjects and the regular departments.

The Annual represents the medical literature of all countries which is arranged in concise, readable form, available for immediate reference. By referring to it the reader is able promptly to inform himself on any subject connected with his profession. It is the greatest book economy.

Ten Sex Talks to Boys (10 years and older). By Irving David Steinhardt, M. D., Instructor in Clinical Surgery and Assistant Surgeon Cornell University Medical School; Assistant Pediatrician, Mount Sinai Hospital, O. P. D., New York City; Orthopedic Surgeon, New York Hospital, O. P. D., and Bronx Hospital and Dispensary; First Lieutenant, Medical Reserve Corps, U. S. A.; Member of American Medical Association, etc. Author of "Ten Sex Talks to Girls" (14 years and older). With twelve illustrations. Philadelphia and London: J. B. Lippincott Company.

The originals of these lectures, entitled, "Seven Sex Talks to Boys," were published in the medical magazine *Pediatrics* after the author had delivered them before several large audiences at the Hebrew Educational Society, of Brooklyn, N. Y., and several large clubs. Everywhere they received a cordial reception and in response to many requests the author has revised and enlarged these lectures until the series now numbers ten talks which he offers to the public in book form. There is no attempt to be

scientific, but only to speak plainly so that the talks can be understood by all. It was the author's purpose to do something toward saving the boys, little and big, from wrong-doing and disgrace, and make of them better sons, husbands, and fathers.

Judge Ben Lindsey says:

"The books of Dr. Irving Steinhardt, known as 'Sex Talks to Boys and Girls' seem to me to be eminently fitted for such instruction. I think they would be especially helpful in the hands of parents. The great difficulty is that parents do not know how to instruct their children. Dr. Steinhardt's books will enlighten them."

Anatomical and Physiological Encyclopedic Chart of the Human Body. A Key to Spinal Therapeutics. By Irving J. Eales, M. D., D. O. and C. W. Taber. Fifteen illustrations, Lithographed, not printed, in seven colors, both sides. All nerves colored differently to indicate their functions. Heavy enameled cloth stock, not paper, 34x46 inches, mounted top and bottom with wood rollers, ready to hang on the wall. I. W. Long, Publisher, 5 Wesley Block, Columbus, Ohio. Price, \$5.00.

This chart is the standard compendium of all manipulatory Treatments, including Spondylotherapy, Electrotherapy, Osteopathy, Radiotherapy and Massage, together with the Anatomy and Physiology, Symptomatology and Diagnosis that constitute a basis for the understanding and application of all forms of Spinal Therapeutics.

The medical profession is conservative; perhaps ultra conservative. Over eighty years have passed since the Doctors Griffin of Great Britain published their work on the relation of spinal manipulation to certain symptoms. Ling and Hall and other investigators have come and gone, and even forty years have passed since Osteopathy first set forth its claims, and yet massage is the only form of manipulatory treatment that has really received recognition from the medical fraternity.

The time has come, however, when the intelligent practitioner can no longer remain deaf to the claims of various schools. He must at least be familiar with their claims and their bases for the same. Spondylotherapy is now appealing directly to the regular medical practitioner, and as Dr. Abrams says, its successful practice "requires knowledge, observation and experience of the highest kind, and is comparable to the best effort in any other department of scientific medicine."

This chart does not claim to be a course

in any of these manipulatory or applicatory systems, yet it does furnish the basis for a thorough understanding and successful application of them. After all the treatises on these subjects have been read and studied, this chart will remain the daily guide to the more complete mastery and successful practice of each of these systems.

This is the sixth revised edition of the chart. It has circulated in nearly every civilized country on the globe and though it has had many imitators, it still holds its supremacy. It has been out of print for a couple of years but on account of the constant demand for it, the publishers found it wise to revise and add to the chart and issue another edition.

Reprints Received.

Operations for Malignant Tumors of the Neck, by J. Shelton Horsley, M. D., F. A. C. S., Richmond, Va. Reprinted from the Virginia Semi-Monthly.

Abdominal, or Extra-Uterine, Pregnancy With Living Child, by J. Shelton Horsley, M. D., Richmond, Va. Reprinted from Surgery, Gynecology and Obstetrics.

Abdominal Pregnancy With a Living Child, by J. Shelton Horsley, M. D., Richmond, Va. Reprinted from Surgery, Gynecology and Obstetrics.

The Role of Exercise in the Treatment of Visceroptosis, With Special Reference to the System of W. Curtis Adams, by Stella S. Bradford, M. D., Montclair, New Jersey. Reprinted from The Medical Record. William Wood & Co., New York.

The Value of and Indications for Incision of Ear Drum in Otitis Media, by Richard M. Nelson, M. D., Atlanta, Ga. Reprinted from Journal-Record of Medicine.

Mountain Fever, by E. Stuver, M. D., of Fort Collins, Col. Reprinted from The Medical News.

Heredity, by E. Stuver, M. S., M. D., Ph. D., Fort Collins, Col. Paper read before Columbian Club.

Farm Hygiene, by E. Stuver, M. S., M. D., Ph. D., Fort Collins, Colo. Reprinted from Denver Medical Times.

The Doctor and the Public, by E. Stuver, M. Cs., M. D., Ph. D., Fort Collins, Colo. Reprinted from Colorado Medicine.

A Suggestion on Phenol and Ichthyol in External Otitis, by Richard M. Nelson, M. D., Atlanta, Ga. Reprinted from *The Journal of the American Medical Association*. Copyright, 1913.

Rarity of Sarcoma of Sclera—Report of a case with Removal and No Recurrence, by Richard M. Nelson, M. D., Atlanta, Ga. Reprinted from *The Journal of the American Medical Association*. Copyright, 1913.

Chronic Intestinal Stasis. A. Types of Cases. B. Preventive and Medical Treatment Outlined, by William Seaman Bainbridge, A. M., Sc. D., M. D., New York City. Reprinted from *The Woman's Medical Journal*.

The Significance of Intra-Abdominal "Bands," "Folds" and Veils," by William Seaman Bainbridge, A. M., Sc. D., M. D., New York. Reprinted from the *Boston Medical and Surgical Journal*.

Chronic Intestinal Stasis Surgically Considered, by William Seaman Bainbridge, A. M., Sc. D., M. D., New York. Reprinted from the *New York Medical Journal*, incorporating the *Philadelphia Medical Journal* and *The Medical News*.

The Proper Diet in the Tropics, With Some Pertinent Remarks on the Use of Alcohol, by Allan Eustis, M. D., New Orleans. Reprinted from the *American Journal of Tropical Diseases and Preventive Medicine*.

Acidosis: Two Types Demonstrable—An Endogenous and an Exogenous, by Allan Eustis, B. S., Ph. B., M. D., Assistant Professor of Dietetics and Nutrition, Postgraduate Medical School, Tulane University, New Orleans, La.

Malta Fever in Louisiana—Report of a Positive Case in a Series of Forty-six Agglutination Tests with *Microbaccillus Melitensis*, by Creighton Wellman, M. D., Allan Eustis, M. D., and S. S. Schochet, New Orleans. Reprinted from the *American Journal of Tropical Diseases and Preventive Medicine*.

The Dietetic Treatment of High Blood Pressure, by Allan Eustis, B. S., Ph. B., M. D., New Orleans, La. Reprinted from *The Southern Medical Journal*.

Acidosis: Two Types Demonstrable—An Endogenous and an Exogenous, by Allan Eustis, B. S., Ph. B., M. D., New

Orleans, La. Reprinted from the *New Orleans Medical and Surgical Journal*.

Improved Technic for Blood-Counts: Rapid Method for Securing Exact Amount of Suspension, by Allan Eustis, B. S., Ph. B., M. D., New Orleans, La.

Urticaria—An Experimental Lesion Produced by the Local Application of Betainimidazoethylamin. Its Relation to Intestinal Toxemia, by Allan Eustis, M. D., New Orleans, La. Reprinted from the *New Orleans Medical and Surgical Journal*.

Diabetes Mellitus and its Differentiation from Alimentary Glycosuria, by Allan Eustis, B. S., Ph. B., M. D., New Orleans, La. Reprinted from *The American Journal of the Medical Sciences*.

Notes on Cases of Sprue Invalided from the Tropics; Will it Become Endemic Here? by H. B. Hiatt, M. D., High Point, N. C., and W. Allan, M. D., Charlotte, N. C. Reprinted from *The Journal of the American Medical Association*.

Abstracts of the Leading articles of the month.

Cause of Acute Anterior Poliomyelitis.—Lust and Rosenberg (*Munch. Med. Woch.*) have studied this subject upon fowls and conclude that fowls are not sensitive to the virus of this affection as found in men and apes, whether exposure is natural or artificial. The occasional occurrence of a paralyzed chicken in the neighborhood of an epidemic of acute poliomyelitis is not sufficient to identify the disease in fowls with that in man, so that anatomical and histological studies must be made in the diseased fowl. The latter have revealed various abnormal conditions in the fowl's spinal cord, as might have been expected; but acute poliomyelitis as seen in man and apes is not included. Nevertheless, but a few chickens have thus far been examined in this respect. But even if the histological finds are ever found to be the same, the failure of the virus to take still will furnish an obstacle to identity. Fowl paralysis is not the only disease of fowls which attacks the nervous centers. In fact, if we take the domestic animals as a class, centers are involved in a number of severe affections—Borna's disease in horses, the dog plague and rabies canina, guinea-pig

paralysis, and perhaps the fowl pestilence—are all evidently due to an ultrafilterable virus, and all prevail in the form of epidemic diseases, just as does acute poliomyelitis in man.

Infection of Children With Bovine Tubercle Bacillus.—Mitchell (British Medical Journal) mentions seventy-two consecutive unselected cases of tuberculous cervical lymphnodes in children. Guinea pigs were inoculated with tuberculous material as soon as possible after receiving it, and the lesions subsequently developing were the immediate result.

It soon became evident that he had to deal with two distinct groups of tubercle bacilli, one of which far exceeded the other in virulence for the rabbit. The groups he has designated luxuriant and sparse. The sparse group is a very large one and contains sixty-five viruses. All the cultures of this group grow very sparsely or not at all on glycerin egg and are assuredly of the bovine type. The luxuriant group grows well on glycerin egg in primary cultures and succeeding generations and includes only seven out of the seventy-two viruses investigated. This division into luxuriant and sparse viruses has corresponded in all cases with the difference in virulence in rabbits.

By his study he is convinced that cow's milk containing bovine tubercle bacilli is clearly the cause of 90 per cent. of the cases of tuberculous cervical lymphnodes in infants and children residing in Edinburgh and district, and is responsible for by far the larger proportion of tuberculous cervical lymphnodes in children during the milk drinking period of life. Bovine tuberculosis can, therefore, no longer be considered a negligible factor in respect to the spread of tuberculosis among children, more especially since unsterilized cow's milk in this country is a vehicle by which tubercle bacilli is most frequently introduced into the bodies of children. Until the proper legislative measures are obtained it is necessary for the public to sterilize cow's milk for the feeding of children.

Regarding the channels of infection, the faucial tonsils have in tuberculosis of the upper deep cervical lymphnodes an importance hitherto not well enough recognized or understood; that is, they act not only as most frequent portals of entry for the tubercle bacillus, but in a large proportion of cases a well marked tuberculosis of the upper deep cervical lymphnodes is secondary to a small tuberculous focus in the tonsil (37 per cent.). Mitchell so investigated the hypertrophied faucial tonsils removed from

ninety children, in whom the cervical lymphnodes showed no clinical evidence of the tuberculous disease; six of these hypertrophied tonsils gave histologic evidence of tuberculous disease, while nine (10 per cent.) yielded positive results when inoculated into guinea pigs. The bovine bacillus was present in three cases, and the human in one case. The high percentage of faucial tonsils in which the bovine virus was present, Mitchell thinks, is further striking proof of the frequency of tuberculous cow's milk as a source of infection.

Use of Chlorinated Alcohol in Skin Disinfection.—Pellegrini (Semaine Médicale) is stated to have found chlorinated alcohol the equal of tincture of iodine in efficiency as a skin disinfectant, and superior to it in other ways. The preparation is made simply by passing chlorine fumes through alcohol, pure or denatured. The chlorine can be generated easily and at slight expense by the reaction of sulphuric or hydrochloric acid on calcium chloride; or, tanks of liquid chlorine, such as are used in the industries, may be secured. Denatured alcohol, when chlorine is passed through it, loses its greenish color, becoming colorless and later assuming a yellowish tint; its penetrating and irritating odor also disappears, and is replaced by a rather agreeable odor.

His preoperative procedure is to rub the hands for seven or eight minutes with a sterile gauze compress saturated with the chlorinated alcohol; the hands are then dipped in the solution itself for about two minutes. The gauze compress is changed at least once during the procedure, and the chlorinated alcohol discarded after the hands have been dipped. The preparation does not irritate the skin, even upon repeated use, as the author has had occasion to observe in six months' trial of it. In several hernia cases the preparation was used for disinfection of the operative field, and healing by first intention was obtained, as with Grossich's method. Even where a pad saturated with the chlorinated alcohol was left on the operative wound no irritation resulted. The preparation presents the advantage over iodine of not discoloring the tissues and obscuring landmarks; on the contrary, it tends to bleach the tissues. It seems to injure rubber gloves less than iodine tincture, and does not fix blood to the skin, as does the latter. By reason of its lack of irritant properties it can be used with advantage where tincture of iodine causes blistering or dermatitis. The persistent brownish coloration of the skin is also avoided.

Comparative Value of Cardiac Remedies.—Janeway (Archives Internal Medicine) calls attention to the special value of digitalis in cases of well compensated mitral disease in which auricular fibrillation, with marked tachycardia, sets in acutely. Dyspnea is generally inconspicuous in these cases, the symptoms being great exhaustion on exertion, dizziness, and a tendency to syncopal attacks. The tachycardia and symptoms can be controlled by digitalis within forty-eight hours, and under long continued digitalis medication such patients may maintain a very fair working ability for several years.

In chronic mitral disease with gradually developed insufficiency, general venous stasis, edema, and fibrillation, the rapidity and completeness of functional recovery under digitalis are in almost direct proportion with the heart rate. In rheumatic mitral disease with fibrillation, if the rate is normal or slow, benefit from digitalis may not appear until after a week or more, or unless accessory measures such as the extreme fluid and salt restriction of the Karell diet—which the author has found of the utmost value—have been instituted.

As to dose, the author has not found the large doses used by Mackenzie and Cushny to be necessary; he prefers a dose equivalent to not more than one and a half grain (0.1 gram) of the leaves every four hours. This is continued until the pulse rate falls to near 60 or becomes bigeminal; or, failing, this, until absorption of edema is complete or toxic symptoms ensue. The drug then stopped and not resumed until increasing rate or pulse deficit, or disappearance of coupled beats, is observed, usually in from five to ten days. Then one half or three quarters of the daily amount given before will control all symptoms.

In certain cases with normal heart rhythm, particularly those with cardiac insufficiency secondary to prolonged high blood pressure, the author has seen digitalis followed by as speedy relief of symptoms as in fibrillating cases. No dangerous increase in blood pressure from digitalis in these cases is to be apprehended; in fact, the pressure usually shows a shrinking fall under it. When digitalis alone does not effect prompt improvement, the caffeine diuretics, given intermittently in small doses—two grains of caffeine, ten (0.6 of theobromine sodium salicylate, or three (0.2) of theophylline, for three doses, repeated only after one or two days' interval—may remarkably increase the urinary output, with absorption of edema, not only in cardiac and renal disease, but occasionally even in the ascites of hepatic cirrhosis.

In cases of primary myocardial insufficiency refractory to digitalis bodies alone, combined digitalis and caffeine medication, or one drug of the caffeine series alone, should be tried. In paroxysms of dyspnea, nitroglycerin or the nitrites may temporarily relieve or cut short the attack. In acute pulmonary edema in such patients, nitroglycerin, together with caffeine hypodermically, is of service.

In mitral disease with regular rhythm, improvement under drugs is slow; but digitalis, administered up to the point of producing toxic symptoms, does seem to improve the dyspnea.

When, in emphysema, an attack of asthma leads to acute insufficiency of the right ventricle, caffeine often acts surprisingly well.

In all hearts with regular rhythm the use of digitalis should be more cautious than in fibrillating hearts. Certain types of extrasystolic irregularity are improved by digitalis; others may be made worse. Frequent extrasystoles in insufficient hearts indicate caution in the use of digitalis.

Casein-Fat Milk as Food in Disease and Health.—Heim and John (Monats. f. Kinderhk.)

fed 45 healthy children, beginning between the end of the second week of life and the fourth week, with casein-fat milk and continuing to the end of the seventh month. The children were at the end of that time all in good condition; the color, sleep, appetite, absence of dyspeptic processes, activity, motility, and all the bodily functions remained normal. The skin and mucous membranes were normal, in contrast to the eczematous conditions frequently observed in children fed on cow's milk. The milk is prepared by heating to 40 deg. C. with a coffee-spoonful of labe-sence, causing a complete coagulation. The curd is then thoroughly broken up by stirring, when the cheese is pressed through a fine hair sieve, allowing the whey to run out. The remaining curd is mixed with two-thirds as much warm water and pressed through the sieve. An almost homogeneous fluid remains. This is placed on the fire to boil for three minutes. Then one-third hot cow's milk is added and 30 grams of Sohxlet sugar, and the mixture is put in a cool place. When this milk is given to young healthy children their nourishment is perfect, and when given to dyspeptic children the good effects are very soon apparent. The stools become fewer, consistency and color normal body weight begins to increase and diuresis is apparent. The number of feedings can be reduced. Increase in weight, and in growth in length, ossifi-

cation of the bones, and function of the bodily organs are all found to be normal under this feeding. If constipation is caused it can be combated by the use of milk sugar. The effect of this food on dyspepsia is seen in twenty-four hours. The food agrees with very young infants, in whom cow's milk causes dyspepsia.

On Tincture of Digitalis (B. P.): Its Activity and Stability.—Symes (British Medical Journal) reaches these conclusions:

1. Few tinctures of digitalis are, initially, below standard.

2. Tinctures, not below standard, vary 200 to 300 per cent. in initial activity.

3. All such tinctures, after a variable period of constant activity, undergo deterioration, which may commence within a month of manufacture, and may amount in a year to 70 per cent., or more, of their initial activity.

4. Concentrated alcoholic extracts of digitalis leaf compare favorably with, and behave as, the British Pharmacopeia tincture.

5. Solutions of crystalline French digitalis (German digitoxin) are more stable than the above.

6. Commercial "non-alcoholic" tinctures, and allied preparations, are not trustworthy.

Adrenalin-Pituitrin Therapy.—Rohmer (Munchener Medicinische Wochenschrift) says that in the Universitätsklinik at Marburg they have been using a combination of adrenalin and pituitrin with most satisfactory results in acute conditions, such as pneumonia, diphtheria, and typhoid fever, and from their experience they felt justified in recommending pituitary extracts, hitherto extensively used only in obstetrical cases, in a combination with adrenalin in acute diseases of the circulatory system.

As is well known, a serious objection to the use of adrenalin by itself, especially its intravenous application, is that the increase of blood-pressure produced is only temporary and is soon followed by a fall, sometimes menacing, below the original figure. The subcutaneous injection, on the other hand, is unsatisfactory inasmuch as it takes several hours for only a small part of the substance to enter into the circulation, about 94 per cent. being used up at the site of injection, which accounts for the large and oft-repeated doses which can be given with impunity.

Animal experimentation has shown that the action of intravenous injections of adrenalin preceded by or combined with pitui-

tary extract is very favorably influenced. Kepinow was the first to show the difference in the action of these two substances.

As a result of Kepinow's studies Matthes was led to use the combined treatment at the bedside, with satisfactory results. The author also has been using it for the past few months on children of all ages, and was able to demonstrate its efficiency in severe circulatory disturbances, such as pneumonia, diphtheria and typhoid fever. The dose administered to young children was 0.25 Cc. of a 1:1000 pituitary preparation combined with 0.5 Cc. of a 1:1000 adrenalin solution. The dose may safely be doubled for older children, and any of the commercial preparations may be used.

A comparative study of the action of the various preparations at the bedside is not so easy. The results reported vary from two to six hours with regard to the duration of the adrenalin—i. e., in which a second dose is required—the variation being furthermore complicated by individual idiosyncrasies. The same holds good for the two substances combined. The fact that in these serious conditions one is loath to forego the use of other therapeutic measures prevents an exact estimation of the action of the adrenalin and represents another difficulty of an already difficult situation. The author usually administered the combined drugs (dose as above) at intervals of six hours, supplementing them with an injection of camphor or caffeine during the interval. The results were satisfactory beyond all expectations in desperate cases of pneumonia, and particularly in a serious case of diphtheria. In the latter a temporary remission of the adrenalin-pituitrin and the retention of other treatment produced a grave crisis, which was promptly relieved by a renewal of the organotherapy. In a case of pneumonia in an eighteen-months-old infant camphor failed utterly to give results, so that medication was limited to adrenalin and pituitrin. During a severe collapse blood-pressure, which before the injection stood at 60 with a pulse of 200, increased to 80 in two minutes, to 90 in the next two minutes, and in another 15 minutes sank to 85, remaining around 80 during the next five hours—until the next injection—with continued improvement in the general condition. Careful control of the pulse and blood-pressure in this case showed that the duration of the combined action of adrenalin and pituitrin is about six or seven hours.

Accidents Due to Salvarsan and the Value of Adrenalin.—Ehrlich (British Medical Journal) while not knowing the

exact symptoms of a patient who recently died in Guy's Hospital, and therefore not taking up the discussion of the case, does not, however, neglect the opportunity to explain in a few lines the views at which he has arrived as to the origin of the nervous phenomena after salvarsan injection, and in particular encephalitis hemorrhagica.

The phenomena mentioned are indeed happily rare, but their origin is extraordinarily complex. In his address at the London International Congress he explained in detail that he associates these cerebral symptoms with syphilitic processes (especially the presence of spirochætae in the meninges—that is, in the capillaries of the brain), and believes that through the dissolution of the spirochætae and the escape of the endotoxins certain alterations occur, which only find expression after an incubation of several days.

The essential point in hemorrhagic encephalitis is a colossal dilatation of the vessels in the affected part of the brain, which may lead later to edema of the brain, and to perivascular bleeding. The dilatation of the vessels is, in his opinion, in close connection with the salvarsan injection. He believes that the vascular system, altered by the endotoxin, is not indeed oversensitive to salvarsan as such, for otherwise the condition would appear immediately after the second injection (and the illness occurs especially upon the second injection of salvarsan), whilst it generally shows itself two days later.

The delay indicates that here a derivative of salvarsan has come into action, and he has previously expressed the view that this is an oxidation product, paraminophenylarsenoxide, to the irritative properties of which he has from the first directed attention. The formation of paraminoarsenoxide is favored by all forces which cause a delay in salvarsan excretion, such as an overdose or presence of kidney disease. Under these conditions larger quantities of salvarsan than usual may remain behind in the organism, and succumb later to oxidation, forming the dangerous oxide.

But from the latest occurrences it seems probable that yet a third factor enters into the matter, which is perhaps the most significant.

The irritated vessels only undergo dilatation of so colossal a character under the influence of the arsenical substance, when the normal regulator of the vascular system, adrenalin, is present in insufficient quantities in the blood, as is the case in Addison's disease, and in hypoplastic processes occurring in the suprarenals (status thymolyphaticus).

Milan has done a great service by discovering the significance of adrenalin in a number of salvarsan accidents. The doctor showed that the accidents described by Hoffman and Jaffe and Moirowsky, which developed immediately after the injection of salvarsan, and were characterized by blue-red swelling of the face, lips, and eyes, avoided if adrenalin be injected before the salvarsan injection. He showed, further, that severe diarrhea and suppression of urine, threatening life, which occurred after salvarsan injection, were cured by an injection of adrenalin. Supported by these observations Milan has, by means of energetic adrenalin treatment, saved an otherwise hopeless case of encephalitis hemorrhagica, in which on the second salvarsan injection the deepest coma ensued.

A further favorable result has been obtained by Privatdozent Pinkus, in a case not quite so severe, and recently he informed Ehrlich that Fiocco had obtained still another success; in a case dangerously ill after salvarsan the coma disappeared after four injections of adrenalin, but after twenty-four hours it returned, and it was only after further treatment with adrenalin that the patient recovered. This case is, in Ehrlich's opinion, absolutely conclusive, since after the favorable result of the second course of adrenalin injections it is to be taken as certain that the relapse of the coma was only due to excretion of the adrenalin between the first and second courses of injections of adrenalin.

Ehrlich draws from these observations the hope that it will be possible, through a vigorous adrenalin treatment, to overcome this scourge of the salvarsan therapy in, it is to be hoped, a very large percentage of the cases.

It will be seen from the above remarks that he is absolutely against the view that the brain swelling signifies a simple arsenic intoxication, as has in several quarters been supposed. Ehrlich believes, on the contrary, that we have to do here with a very complex process, consisting of at least three links, the details of which are now known to us, so that we can now avoid it, or, should it appear, combat it successfully in most instances.

The patients specially threatened with encephalitis hemorrhagica are, as is known, those in whom the brain in the early secondary period of syphilis is flooded with spirochætae. Ehrlich has, during recent years, over and over again insisted that in these conditions we must not attack the disease with a bludgeon (mit Hammerschlagen) in the form of large doses, but must gradually steal in and get rid of the para-

sites gradually. For this purpose, in such cases—as is done, for instance, by Gonnerich—a thorough course of mercury should precede the salvarsan treatment, and the dose chosen for the first injection of salvarsan should not be high. Ehrlich's views on this point are summarized in the book of Meirowsky and Kretzmer.

When all the above-mentioned precautions are followed we may cherish the certain hope that the number of cases of encephalitis will no longer give occasion for hesitation. But should a threatening condition, in spite of all, ensue, the observation of Milan gives us a means whereby even here, through energetic and systematic treatment with adrenalin, it is possible to save the patient. A single injection is, in such conditions, naturally not enough; we must give the adrenalin treatment as strongly as possible and as long as is necessary to obtain the desired result.

It follows from what has been said that the demonstration by chemical examination of arsenic in the organs can offer no explanation at all of the etiology of this form of illness, for it is obvious that a few days after a salvarsan injection arsenic must be present in the organism. Such an examination would be of value only if it were possible to decide in what form arsenic was present in the organism, whether as unchanged salvarsan, or in the form of the poisonous oxide, or—which does not seem to Ehrlich probable—in the form of split-up arsenous acid. But a solution of this problem is, at the moment, not possible.

The Treatment of Pneumonia.—Sewell (Australian Medical Journal) says that having eliminated the possibility of chronic kidney disease, what can we do to help the individual suffering from hypertoxemia? It is in such cases that the giving of pneumococci serum early and in large doses is so urgently indicated, together with sensitized vaccine, since the serum certainly has some antitoxic value. Again, in these cases there is always some degree of pneumococcal septicemia, and it is of the greatest importance that bacteriolytic substances should be brought into action without delay. Sewell is convinced also that subcutaneous balanced salines are of very great value since they help to maintain blood-pressure and promote diuresis, thus indirectly helping the elimination of toxins. Subcutaneous salines may be given almost painlessly by a careful nurse, using either a douche-can or a funnel. Sewell does not approve of any form of force syringe for this purpose.

One of the worst cases of pneumonia he

has seen was in consultation with another doctor last year. A patient of sixty-five with an extensive double pneumonia was in a condition of high delirium with low blood-pressure and poor leucocytic response. Here, in addition to serum treatment, one pint of saline was administered subcutaneously for eight days at six-hour intervals, the patient making ultimately a good recovery.

Another common manifestation of hypertoxemia is a falling blood-pressure, thus illustrating the great importance of blood-pressure observations in this disease. This fall of blood-pressure has been definitely shown to be due to a failure of the vasomotor mechanism and not to any extent to myocardial weakness. In a case showing a good reaction the slight asphyxial conditions present bring about a slight rise of blood-pressure, but in cases of hypertoxemia the fall of blood-pressure is probably due to direct poisoning of the vasomotor center and possibly indirectly to a condition of cloudy swelling occurring in the adrenals and pituitary body, thus diminishing the output of normal pressor substances into the general circulation. Accordingly it is advisable, in addition to subcutaneous salines, to temporarily supply pressor substances which are deficient.

Immediately we are faced with a difficulty in choosing our pressor substance. Adrenalin extract is too transitory in its effect to be of very much value. Again, if used in minute doses in the subcutaneous saline, say 1 in 100,000, it simultaneously contracts the small vessels in the kidney with those of the body generally and so diminishes the urinary output. On the other hand, pituitary extract, while constricting the systemic arterioles and so raising blood-pressure, does not constrict the renal arterioles, and thus acts as a diuretic. However, it has been found experimentally that repeated doses of pituitary extract may bring about a reverse action and an actual fall of blood-pressure may result after its exhibition. Sewell has never seen a bad result with it even where it has been used four-hourly for five days in succession, but always takes the precaution of seeing that blood-pressure observations are made shortly after it has been injected. On the other hand it is of great value in many cases. In one case recently seen in consultation with Dr. Mackay where the blood-pressure was under 80 on the third day of an attack, the pressure was permanently maintained during the remainder of the illness at between 95 and 100 by the use of pituitary extract at six-hour intervals.

He mentions another case to further illustrate the importance of regular blood-pressure observations in pneumonia. A patient was admitted under his care in the Melbourne Hospital soon after the onset of this disease. The clinical clerk informed him that there were 7000 leucocytes present and that the blood-pressure was 120. On inquiry about the urinary condition, he was told that the specific gravity was 1020 and that there was a trace of albumin present. It seemed from this report and from a general examination of the patient that, apart from the rather low leucocyte count, the patient's response had been a fair one; however, the house physician informed him that when the patient was admitted two days before his blood-pressure was 170 and that the urine had then a specific gravity of 1012, and, on microscopical examination, showed hyaline and granular casts to be present. This report altered the prognosis entirely, showing as it did a rapidly failing blood-pressure in a patient whose elimination of toxins was interfered with owing to chronic kidney disease, thus accounting for the simultaneous failure of leucocytic response. If he had only had the observations on the blood-pressure and urinary examination made by the clinical clerk subsequently to those of his house physician he would have been far astray in prognosis in this case. The patient died twenty-four hours later.

Quite a number of similar cases have come under his observation during the past twelve months, and accordingly he has felt that it would be of some value to bring before us this aspect of the question, rather attempting to deal with some of the difficulties than to present any complete routine method of treatment.

Food Requirements of Infants.—Pritchard (Brit. Jour. Child. Dis.) states that no infant, breast-fed or artificially fed, can be considered to be in a satisfactory condition unless its physiological demand for food is of the following approximate standard. An infant three months old and weighing 5 kgm. (11 pounds) should require not less than 690 c.c. (23 ounces) of breast-milk, or its equivalent, in the twenty-four hours; an infant six months old and weighing 7.5 kgm. (16½ pounds) should require not less than 900 c.c. (30 ounces); and an infant nine months of age should require not less than 1080 c.c. (36 ounces). If, when taking food in these quantities, there is evidence that there is an excessive intake, steps should be taken to increase the demand for food by a revision of the hygienic management of the child. A de-

mand is created when the appropriate stimuli of air, light, and cold are applied. An excessive intake is suggested by an abnormal increase in weight, say of 10 to 14 ounces per week, in a baby under a year old if maintained for any prolonged period of time, tilation of the capillaries of the cheeks, sweating about the head, and unduly rapid respiration-rate.

Oxytoxic Remedies.—Tassius (Arch. f. Gynak.) believes that quinine may be used in the period of dilatation as well as during that of expulsion and it is also of value in cases where labor is induced before term. Pituitrin was found to be a reliable remedy in secondary inertia and the effect increased with the period to which labor had advanced. In the process of abortion it favors the process of dilatation and makes curettage easier. For the induction of premature labor it was found of less value during the puerperium, especially for hemorrhage it was very serviceable. Tassius is convinced however that it cannot induce labor pains. Unfavorable influences on either mother or child are relatively rare if care in the administration is observed. Pituglandol was found to be very efficient in secondary inertia as well as in abortions and the induction of labor, although it is not efficient for the production of the latter. The writer states that it is valuable in eclampsia, placenta previa, uterine hemorrhage, particularly in combination with ergot preparations. Secacornin, an ergot derivative, was not found to be of value during labor or in the treatment of abortions, and the site of injection was likely to be painful. It was particularly applicable however to the postpartum period after the delivery of the placenta.

Treatment of Breast Abscess.—Mores-tin (Gazette des Hopitaux) recommends that, where the esthetic result is of significance, incision in mammary abscess be confined to the areola. With this procedure the scar subsequently formed is in the great majority of cases practically invisible. The situation of the suppurative focus is first ascertained, the presence of a superficial portion of the abscess cavity being clearly recognized, and an incision then made from the base of the nipple to the margin of the areola in the direction of the portion of the gland involved. In the parturient woman the areola is larger than usual, so that an incision two to three cm. in length can almost always be made. The knife is next carried under the skin toward the superficial abscess cavity, which is opened. A grooved director, hemostat, or even the

gloved finger, is then inserted in this cavity in order to explore it and find the channel by which it communicates with the deep, intraglandular portion of the abscess. This channel having been identified—which is very easily done if the abscess is well “gathered”—the knife is reintroduced and the tissues forming the walls of the channel are separated, even if a considerable thickness of mammary tissue has to be cut through. After making sure with the finger that the channel has been rendered as broad as the deep pocket itself, the latter is well evacuated, cleaned out with tincture of iodine or formaldehyde solution, and drained with a relatively thick roll of gauze issuing through the areolar incision. Bleeding is generally very moderate in amount and soon stops. Where several segments of the mammary are simultaneously involved, each is dealt with as described. The areola being always more or less dependent during lactation, drainage takes place without difficulty. The results obtained with this procedure have been wholly satisfactory. Repair takes place very rapidly; in three to five days, rarely later, the drainage can be dispensed with, and complete recovery occurs in ten or twelve days.

Chronic Recurrent Diarrhea in Childhood.—Poynton, Armstrong and Navarro (British Journal of Children's Diseases) say that malabsorption is clearly a predominant feature in these illnesses, and we need not delay over the infantilism or extreme weakness of the lower extremities, or flatulent distention and general flabbiness and anemia, for we think this is a sufficient explanation. It is an interesting point that a considerable number of cases after reaching the age of five to seven seem in a mysterious way to outgrow the tendency to recurrent attacks, and to gain step by step a tolerance to a more generous diet; and one wonders in such cases to what extent the bowels remain permanently damaged, and whether the liver or pancreas or both acquire in some way a greater vitality, and thus aid in overcoming the celiac element.

The problem of the diet seems to us a very difficult one, for a study of their cases, and of others they have not recorded, seems to point to any of the chief articles of diet as being at one time or another harmful, although they think Herter inclines to the carbohydrates as the first offenders. Fat seems to stand first as the most difficult, yet some cases may take cream. Carbohydrates may be tolerated better than any foods at times when the condition is almost desperate, but often they are ill-borne, and if pressed appear to assist in causing disten-

tion in which the entire bowel is implicated. Broths and meat-juices are, perhaps, as likely to be dealt with successfully as any food, but with milk the most diverse results occur. In some cases milk seems most injurious, in others it has been the great standby. The dried milks have often been of service. Eggs are frequently disastrous, and again fish has been most unsatisfactory, and minced meat equally so. The malted foods are very likely to produce diarrhea. The wide-spread intestinal lesions prepare us to find that all forms of food may be difficult to assimilate. With them, in fact, it has been that in some cases a diet has been arrived at by bitter experience with the particular individual, and has been evolved quite empirically. They add that diarrhea is by no means an invariable symptom, for there may also be constipation, which may prove equally dangerous from consequent meteorism. Of all drugs, the one that seems to the authors after a prolonged experience to be the most generally successful is bismuth. They have had the most convincing proof of this in the fact that several mothers of much intelligence and unsparing in care of their children have come back asking for this when a relapse was threatening.

They do not pretend that it will cope with the worst cases, but it is, they believe, of the greatest value in the milder ones, although it is powerless to combat an unsuitable diet. Opium and gray powder have, as is well recognized, their times of value; and when the stage of convalescence is well established mild iron preparations are useful. The routine use of cod-liver oil and malt in the stages of remission may, in their opinion, precipitate an attack.

The remarkable tendency to great abdominal distention and the diagnosis in some of these cases of dilated colon raise the interesting question as to whether a condition allied to Hirschsprung's disease, or, indeed, whether some cases actually described as of this nature, are not to be ascribed to this peculiarly severe and chronic affection damaging the neuro-muscular elements of the bowel. The course of events one would picture, then, is that the active disease has quieted down, leaving a much weakened gut, and constipation has resulted. This constipation has been neglected or permitted at first as a lesser evil, and thus added to the strain upon the weakened bowel, with the result that an extreme degree of atony of some of the most affected parts has resulted.

The diagnosis from abdominal tuberculosis is not easy, and it is one of the valuable results of the examination of fatal

cases that it proved conclusively that a condition at first considered more than once to be of a tubercular nature was undoubtedly non-tubercular. This particular point strikes one that the rapidity with which in this affection extreme illness is reached and the possibility of recovery from such an extreme condition on more than one occasion make a clinical picture unlike that of abdominal tuberculosis. The absence of tubercular masses in the abdomen is also another factor of importance. The occurrence in a few cases of general anasarca with ascites is very remarkable. The fatal cases also warn us against becoming stereotyped in our use of such terms in childhood as gastritis, gastroenteritis, and colitis, for there was evidence here of an affection of the entire alimentary tract beyond the esophagus.

Lastly, with regard to the bacteriology, it is clear that at present the results have been too diverse for us to see our way at all plainly, although the accurate investigations recorded are suggestive. To us the peculiar recurrent alimentary disturbance suggests an infective origin, but the acholia may very possibly be the result of some bacterial processes grafted upon the bacterial infection. The valuable investigations of Herter upon this point are of much interest, but at present they incline to the view that the celiac element was not in their cases to be looked upon as the essential element in the illnesses, and state as further evidence in support of this that celiac symptoms may develop abruptly in the course of a night after a sudden chill (a point commented upon by the late Dr. Cheadle), without evidence at any time of such a form of diarrhea as was met with in the cases related here.

They emphasize the act that this contribution has been brought forward with the desire to learn both from the clinical and pathological side any facts that may assist us to deal with these exceedingly difficult cases more satisfactorily and understand their interpretation more clearly.

Finally they give a specimen of a full diet for a child aged three years with morbus coeliacus, upon which a gain of weight was obtained in hospital:

Breakfast at 5 a. m.: Bread, 2 ounces; butter, 3 drachms; fat bacon, $\frac{1}{2}$ ounce; milk, 7 ounces. Fat-free diet: Bread and jam, 2 ounces; weak tea with 2 lumps of sugar, 7 ounces.

Lunch at 9 a. m.: Bread, 1 ounce; butter, 3 drachms; milk, 5 ounces. Fat-free diet: Biscuits with jam, 2 ounces; lemonade, 7 ounces.

Dinner at 12 noon: Mince, 4 ounces;

pudding, 4 ounces; milk, 5 ounces. Fat-free diet: Fish or mince with potato, 6 ounces; bread and jam, 2 ounces.

Tea at 3.30 p. m.: Bread, 2 ounces; butter, 3 drachms; milk, 7 ounces. Fat-free diet: Bread and jam, 2 ounces; weak tea, 7 ounces.

Supper at 6 a. m.: Bread, 1 ounce; butter, 3 drachms; milk, 5 ounces. Fat-free diet: Bread and jam, 2 ounces; lemonade, 7 ounces.

Artificial Pneumothorax in the Treatment of Pulmonary Hemorrhage.—Gray (Chicago Medical Recorder) reaches these conclusions:

1. Lung compression is indicated in severe pulmonary hemorrhage cases.

2. It should be made, in severe hemorrhage, as soon as possible, to forestall the always fatal bronchopneumonia.

3. It is of no avail once bronchopneumonia has become established.

4. The lung should be kept in compression for at least four months.

5. And lastly, aside from the value of compression of the lung as a hemorrhagic agent, one cannot underestimate the influence of prolonged rest on the tuberculous process.

Goiter, Edemic and Exophthalmic.—

Farrant, in *The British Medical Journal*, mentions 85 cases of goiter concerning the relationship between toxemias and diseases of the thyroid. The doctor sought to prove that in cases in which the thyroid is diseased the causative microorganism or toxemia can be determined and to show that in this way diseases of the thyroid cannot only be cured but also prevented. Edemic goiter is caused by the toxins from the atypical forms of *B. coli*. The mutants are usually conveyed by water. They become indigenous in the intestine, and different mutants of *B. coli* are to be found in the feces of cases of edemic goiter. The mutants set up an apyrexial toxemia which stimulates the thyroid, leading to a colloid hyperplasia and eventually to enlargement of the gland. The whole process can be imitated in the laboratory, and edemic goiter can be induced in guinea-pigs by feeding it with small doses of the mutants. The supervention of a fresh toxemia while the gland is in a hyperactive state causes a complete hyperplasia, with absorption of colloid and signs of hyperthyroidism up to a condition of exophthalmic goiter. This is dependent on the intensity and duration of the first toxemia. Endemic goiter is preventable by the avoidance of water contamination and by the sterilization of con-

taminated water. It can be cured by the administration of intestinal antiseptics and the gland returns to normal, providing no degeneration has taken place. The gland as a whole involutes to normal, but the adenomata or cysts are left. A condition similar to endemic goiter can be caused by other toxemias capable of inducing a colloid hyperplasia. Exophthalmic goiter is due to a combination of toxemias of an intensity sufficient to cause a hyperplasia with absorption of the colloid material. One acts during a period sufficient to give rise to a complete hyperplasia associated perhaps with slightly marked signs of hyperthyroidism without necessarily any glandular enlargement. The supervention of another infection stimulates the gland, which usually enlarges, and the signs of hyperthyroidism become very evident; the case develops into one of typical exophthalmic goiter. A nervous shock may suggest the diagnosis by suddenly bringing into evidence the symptoms of hyperthyroidism, especially those connected with the nervous system. The severity and duration of exophthalmic goiter are dependent on the intensity and duration of the toxemias. If they are of short duration the disease will disappear in a few months. Exophthalmic goiter can be prevented by the detection of the early cases of hyperthyroidism and the consequent removal of the basal toxemia. It can be cured, he holds, if the causative agents are removed before degeneration has occurred either in the gland or in those organs that are affected by the hypersecretion.

Progress of the Treatment of Venereal Disease.—McIlroy (British Medical Journal) says that all measures which have as their aim the prevention of compulsory prostitution should be encouraged.

That legislation should be directed toward the permanent segregation of the mentally deficient.

That the judicious education of the people by the medical profession should be undertaken with a view to promote a knowledge of the dangers of venereal diseases both to the individual and to the community.

That it should be a penal offense for any one to communicate knowingly venereal diseases to others who are unaffected or are ignorant of its consequences.

That compulsory notification of all abortions and premature births should be given to the public health authority, and that facilities could be obtained from that authority for the carrying out of diagnostic methods as to the possible cause of such

conditions.

That all measures of treatment should have as their aim the encouragement of patients to present themselves for observation without the fear of any moral stigma being attached.

That all methods of treatment and notification should be in the hands of the medical profession only, and that treatment by unqualified persons should be a punishable offense.

That advice should be given to patients to continue under observation for a prolonged period of time. Methods of precaution to be adopted for the prevention of the spread of the disease to others should be indicated, and other members of the family should be induced to present themselves for observation and treatment if required.

That treatment should be carried out in the wards and out-patient departments of the general infirmaries and hospitals, and all special institutions for the treatment of venereal diseases, such as lock hospitals, should be abolished as such.

In those cases of venereal diseases in which the patient is in an infective condition, and in which he or she is engaged in a trade or occupation the continuance of which would prove a danger to the community, powers should be given to the medical attendant to enforce further treatment or to prevent resumption of that occupation.

In no way should there be police supervision or control of persons infected with venereal disease except at the instigation of the medical profession.

Public health authorities should provide methods of diagnosis and treatment for private practitioners in the case of patients who are unable to afford the expense of such.

More specialized lectures for practitioners, students, and nurses should be given on venereal diseases, and opportunities for clinical and laboratory research.

One Thousand Cataract Operations Performed in Six Weeks at Shikarpur, North Sindh.—Holland, in *The Indian Medical Gazette*, describes the hospital as consisting of one block, containing two operating rooms, one consulting, one dressing, and one dark room, while the so-called inpatients are accommodated in serais situated near the hospital. The staff varied from time to time, but as a rule consisted of three doctors, one assistant surgeon, one subassistant surgeon, one hospital sister, one compounder, two dressers, and three ward boys. Between January 1st and February 15th, 2,330 operations were performed.

ed in that hospital, 1,024 of them for cataract. The largest number of outpatients in any one day was 706, the largest number of operations, 129. Of the 1,024 operations for cataract some 800 were done by Smith's method in the capsule, which he thinks the method of choice. The eye seems to recover more rapidly. "We have had quite a number of cases which have left hospital on the seventh or eighth day, and a few even on the sixth, with no sign of redness, lacrymation, or photophobia." The cases are dressed only once, on the fifth day, a great saving in time when 200 or 300 eye cases have to be attended to at one time. He gives the following as the disadvantages of the intracapsular operation: The tendency to escape of vitreous, which "becomes immeasurably less as the skill of the operator increases," the U shaped pupil, and an increased tendency to choroidal hemorrhage. He also tabulates the advantages as: Less tendency to iritis, less tendency to sepsis, greater economy in time in after treatment, and in dressings, no secondary operation as needing for secondary cataract is necessary, a shorter stay in hospital. He says that the only great disadvantage is the danger of loss of vitreous. The unsuccessful cases amounted to from 4.2 to 4.4 per cent.

Treatment of Parotid Fistula.—Leriche (Lyon Medical) reports the case of a man suffering from parotid fistula as the result of a knife wound in the cheek. The cut extremities of Steno's duct were both found upon examination, but the duct was so small as to preclude its repair by suture. Attempts to cure the condition in such wise as to restore normal function were thereupon given up. The author conceived the idea of abolishing the secretory activity of the parotid by destroying its nerve supply. The auriculotemporal nerve was therefore sought, dissected loose as far as the condyle, and its central end avulsed by slow traction. About four cm. of the nerve was thus drawn out. On the same evening the dressing was found dry. On the succeeding four days a much diminished flow of saliva was observed, chiefly during mastication at meal times. At the end of this period, however, secretion entirely ceased, and a complete cure of the condition was noted. Steno's duct being cut, infection of the parotid was not to be feared, and subsequent atrophy of the gland was to be expected.

The Action of Drugs in Heart Failure.—Turnbull (Australian Medical Journal) says that of recent years much work has been done, both experimentally and clinically, in the effort to determine

by precise methods the action of drugs upon the heart. It is perhaps not too much to say that the only drugs in general use which have a definite and demonstrable effect on the heart are those of the digitalis group. The supposed effects of strychnine, camphor, and the like cannot be actually demonstrated, and remain still a pious belief of the clinician, though efforts are constantly being made to show some definite action. Mackenzie has pointed out that it is rare for a tincture of digitalis, procured in the ordinary way from a reputable druggist, to be inert, but that the reaction of the heart to the drug varies with the nature of the lesion, and his own and other observers' work has established this latter fact thoroughly, and has provided us with some definite knowledge to aid us in using the drug. It is here perhaps that the polygraph will usually prove amply sufficient as a guide to the results of digitalis in treatment. The best results from digitalis treatment are, of course, got in cases of auricular fibrillation, especially where the lesion is an old, rheumatic one, but at times, in cases of this form of arrhythmia, remarkably good results may be obtained even in the hearts of old people, and in those in whom the lesion is due to a toxin—e.g., exophthalmic goitre.

In spite of such careful work by many observers, the probable results of digitalis administration in cases in which the rhythm is normal are very difficult to forecast, but there is undoubtedly a definite action on heart muscle as well as a powerful vagal stimulation, as is shown by the inability of atropine to remove all the results of digitalis. Until our knowledge is much more precise, the wisest course to pursue is to use digitalis in all cases of heart failure with dilation and dropsy, no matter what is the state of the heart, provided rest and good general treatment fail to allow of the recovery of the organ. In any case in which it is definitely considered that digitalis is indicated, and should react favorably, it is essential that the drug be pushed until the symptoms of poisoning—e.g., headache, nausea, giddiness, etc.—are produced, before it is discarded as useless. It is not uncommon to see cases of auricular fibrillation which have failed to react to a dose of tincture of digitalis, 10 minims, t.i.d., continued for some weeks, react promptly and satisfactorily to twice the dose. Of course, if a perfect result is obtained earlier, there is no need to push the drug till unpleasant symptoms are procured, but often the symptoms are noted before any cardiac effect has become obvious. The drug is then stopped for a while, and the

pulse is frequently found to be slowing satisfactorily and the symptoms of heart failure disappearing, the improvement having apparently set in almost immediately after the onset of the symptoms of full drug dosage. As soon as the symptoms of full dosage appear, the drug should be withheld for a day or two, and then given again in smaller doses, just sufficient being used to retain the good effects.

It is doubtful whether any absolute contraindication to digitalis exists, since in some cases in which it produces undesirable symptoms or signs its omission is accompanied by progressive heart failure, but certain signs are danger-signals and indicate that the drug must be stopped if possible, or at least used with very special care. The chief of these are:

(a) Partial heart-block or increased a-c interval, due to an incomplete lesion of the a-v bundle. In these cases digitalis, partly by a direct muscular action, and very largely by its action on the vagus, increases the difficulty of conduction, and may increase the block or cause a previously lengthened conduction period to increase, till some impulses are blocked. Frequently where there is heart failure, the patient may feel much relieved while under digitalis, in spite of the increased difficulty of conduction, and the drug may need to be continued, though at times a combination with atropine is successful in abolishing the vagal effect.

(b) Pulsus alternans. In cases in which this condition is present, digitalis should be used very cautiously, and only where the patient is under careful observation. It often happens that the patient feels distinctly improved for a day or two and then complains of a feeling of exhaustion, which increases while the drug is continued. This is a symptom of great gravity, and if not attended to fatal results may ensue.

(c) Extrasystoles have been said to be banished by digitalis, but the much more common experience is that their numbers are increased by the drug, and its administration may certainly be followed by their appearance in cases in which they were previously absent. In cases of auricular fibrillation the well-known coupled rhythm produced by digitalis is due to the incidence of a ventricular extrasystole following each response to supraventricular stimuli, and in these cases the appearance of the premature beats must be regarded as a danger-signal, as several sudden and unexpected deaths have occurred in such cases, probably from ventricular fibrillation. At times the symptoms of heart failure become marked again immediately the drug is

stopped, but here the physician must use his own judgment in each individual case, or decide which of two evils is the greater, but it is extremely important that he should at once recognize the coupled beat and appreciate its significance and dangers.

High blood-pressure was at one time considered to be a contraindication to digitalis, but much evidence has accumulated in opposition to this view, and there is no doubt that cases with very high blood-pressure are frequently greatly benefited by the drug. In many cases at least the blood-pressure rises as the heart fails, and if the heart is slowed and strengthened the circulatory balance is readjusted and the blood-pressure falls again. The administration of digitalis will only very rarely be found to cause an appreciable rise of blood-pressure in clinical cases.

Myocardial degeneration is certainly no contraindication to the use of digitalis, which often is of great value in cases in which the heart muscle is much degenerated. The value or otherwise of digitalis to a heart laboring in the grip of a toxin is still uncertain, and much work requires to be done to settle this point. However, we know it may be of great value at times in exophthalmic goitre and pneumonia, and at times also in acute rheumatism, and there is no doubt that it should be thoroughly tried where the heart is progressively failing in spite of treatment in any acute disease.

The other drugs of the digitalis group act similarly, but less strongly and certainly than digitalis, and no advantage seems to be got by their substitution for it.

Through strophanthus and squills seem less liable to irritate the stomach, they are apparently more irritant to the intestine. Strophanthus is less readily absorbed from the intestine than digitalis, and this irregularity and difficulty of absorption make it more difficult to handle effectively, and usually much larger doses are required, while squills is irregular in absorption, weak in action when administered by the mouth in man, and is very rarely required where digitalis can be used. If a very rapid action is required in cases of emergency, strophanthin in doses of 1-250 to 1-200 grain given about a drachm of saline solution into a vein will act strongly in about five to fifteen minutes. The dose may be repeated once or twice at about three-hourly intervals. Not infrequently in cases in which dropsy is considerable it fails to clear up even when digitalis is pushed, and here astonishing results are often got by the exhibition of theocin sodium acetate, given in one dose of 10 to 15 grains or in three

doses of 4 grains each within a period of twelve hours. The patient should be well under the influence of digitalis before the theocin is given, and then a full dose is administered within twelve hours, and no more until its effect is exhausted, as it is distinctly a renal irritant, and no good effect is obtained by continued administration.

Turbull's remarks on diagnosis and treatment have dealt almost entirely with advances due to graphic methods concerned in the main with the time relation of the heart-beats and of events in the cardiac cycle, and to a lesser extent with the origin and direction of passage through the heart muscle of impulses giving rise to the contractions.

There is a tremendous field to be covered as regards the work of the heart. At present we have to depend entirely on common-sense methods to estimate its capacity for work. No short-cuts here have so far proved of the slightest value, and the only way is to carefully inquire into subjective symptoms caused by the ordinary activities of life, and to test the results of reasonable exertion and the heart's capacity to satisfactorily react to a call for work.

The prime factor in the maintenance of the circulation is an efficient output from the left ventricle. Arterial resistance affords no motive power; it is merely regulatory. Ventricular output can be measured experimentally in animals, and there are grounds for expecting that it will soon be satisfactorily estimated in man. It depends upon two factors: (1) The efficient driving power of the heart muscle. (2) Proper diastolic filling of the heart.

The latter is chiefly conditioned by the pressure in the venous side of the circulation, our knowledge of the mechanism of which is far from complete. Even such knowledge as we have already derived from experimental work we are unable to apply clinically, since in man we cannot measure pressures or accurately note changes on this side, and it is of such enormous importance to the carrying on of a satisfactory circulation that our work will never be brought to a proper condition of accuracy till this great problem is solved.

On the Respective Advantages and Disadvantages of X-Rays and Radium in the Treatment of Cancer.—Hernaman-Johnson (*British Medical Journal*) says that in early cases, whether for preoperative or postoperative irradiation, the Roentgen bulb is to be preferred to the radium tube.

When surgical removal is impossible, a tube of radium should be buried in the

center of the tumor, but X-rays should be used, in addition, to the surrounding area, and to any organs where a metastasis is likely to occur. This combined treatment may result in some actual necrosis in the immediate neighborhood of the radium, but so long as this is confined to the interior of the neoplasm no harm will result.

Finally, radium therapy is the method of choice in cancer of the vagina, uterus, and rectum; but even here X-rays form a useful adjunct, so far as adjacent parts are concerned. Also, in practice, one finds that one has to wait at least three or four weeks to obtain a supply of radium. Nothing less than 50 mg. is of much value, and the market price of this is 800 to 1,000 pounds. Consequently, most people have to hire their supplies, and pending their arrival X-rays should be used vigorously in all cases. Even uterine, rectal, and esophageal cancer can usually thus be held in check during the unavoidable period of waiting.

There are today thousands of cancer patients who believe, and whose friends believe, that they are being left to die because sufficient radium is not available to treat them. This belief adds greatly to their mental distress, and Hernaman-Johnson has endeavored to show that it is for the most part erroneous.

The Roentgen rays skillfully applied are of service in relieving pain, preventing ulceration, and causing the shrinkage or disappearance of external growths. Active life can be prolonged almost always for months, and sometimes for years. In pelvic cancer the insertion of a radium tube appears to be of greater value; but there is as yet little evidence to show that the results of the new therapy are, on the whole, more lasting than those of the older method.

The Use of Ether in Gynaecology.—Condamin (*Lyon Medical*) says that we speak much today of the results obtained by the local use of ether, the most remarkable of which is its prophylactic action in the treatment of peritonitis and of serious abdominal lesions. In the following lines I confine myself to the domain of gynaecology, and to the grounds on which the treatment is based. The use of ether has long been confined to its antiseptic, sedative and resolvent properties. But for a long time past in the clinics of Larovenne, Guouillon and myself, the vagina has been disinfected by tampons of ether, with which the rugæ and fossa are vigorously cleaned out. By this means we cleared away the fatty substances of the vagina which neutralise the effects of antiseptics. At Paris, in the ser-

vice of Tillaux, we applied freely compresses of ether to all inflammations, acute or chronic, and to cold abscesses. If I have appealed to great clinicians of the past on a method of treatment which is described as new, it is that their authority may rescue it from the finical exaggerations with which its youthful advocates embellish it. In gynecology the ether treatment is applied by two methods, which may be used separately or in combination. It may be poured over a large surface of the abdominal wall, or—in a case of a localised inflammation—over the pelvic regions, or at the fundus of the vagina. Of the rectal etherisations recommended by Vernier I have no experience. Of the large dressings of ether applied to the whole sub-umbilical region, covered by a layer of oiled silk, it is incontestable that the effects are unusually good in all cases, in which formerly the pupils of Laroyenne and Fochier applied blisters or topical vesicants, which were continued for many weeks. This was the usual treatment for acute metrorrhagia and for diffuse inflammatory processes in the pelvis. By our modern method we secure the great advantage of a remarkable lessening in the violence of the pain, and of the distention of the abdomen, and sometimes an apparent resolution of the oedematous inflammatory matter in the pelvis. The temperature falls, and undoubtedly we get the impression that the local application has had an intense antiseptic action. On the other hand, a slight attack of cystitis may follow on the application, so that on the appearance of any albumen it becomes necessary to diminish the size of the etherised surface and to discontinue the application for some two or three days. I have seen these results secured for many years past. I am able to certify that the results obtained by ether judiciously used are resolvent, sedative, and soothing, with the great advantage that there is no risk on the side of either bladder or kidney. It is necessary that the ether should be applied continuously and in full measure. After many trials my two methods of technique, both simple, are as follows: The pathological condition which justifies the treatment is slight, the inflammatory conditions or hyperæmia moderate, the pains become supportable, one application for two hours morning and evening being sufficient. We apply over the pubes a cotton wool compress, strongly impregnated with ether, this is immediately covered by a thick layer of cotton wool and fold of oiled silk, and over all a large body bandage. Indian rubber sheeting is unsuitable and cannot replace oiled silk in this dressing. If in an hour's time the patient does not experience

a sensation of warmth or burning the dressings should be undone and from 10 to 15 centimetres of ether added to the compress next the skin, and the dressings readjusted. In more serious cases, in which the patient should not be disturbed, use the method described below. Put in the outer bandage one or two small rubber tubes, one of the ends of which is at the centre of the compress impregnated with ether, and the other extremity of which is fixed to the outer bandage. By this arrangement we can, every two or three hours, without disturbing the patient, inject by a glass syringe some centimetres of ether into the layers of cotton wool. Not alone are these methods well borne, but the patients themselves call for further doses of the ether, when the former are losing effect. As a variant to this method Vernier adds a small dose of chloroform to the ether, to increase its soothing effects. We have not had occasion to resort to this. Some patients, especially those of a sensitive skin, are very susceptible to its effects. The first applications are sometimes slightly painful; but in a little time this exaggerated sensibility dies away. The local application of ether to the fundus of the vagina is less desirable, and I believe less efficacious. The etherised tampon is placed in the fundus of the passage, the anterior portion of which should be plugged with glycerine tampons to prevent the rapid escape of the ether; this sometimes gives pain. In Vernier's classic account of the drug he describes ether as a feeble antiseptic. We dissent from this; for experiment demonstrates that a trace of ether stays the culture of the bacillus of Eberth. In every case from this hour the many cases of the disappearance of phlegmonous inflammation and observations outside our circumscribed zone affirm the value of the treatment in causing resolution, without absolutely demonstrating it."

Cyto-Diagnosis of the Stomach.—Locper and Binet (*Archives des Maladies de l'appareil Digestif et de la Nutrition*) say this report is based upon 160 examinations; 21 of the cases were followed to operation or autopsy. The patient is examined after a 12-hour fast. An ordinary stomach tube is gently inserted and the stomach washed by siphonage. There is then introduced 300 cc. of 0.7 per cent. salt solution, and within a minute this is allowed to siphon back. This fluid is centrifuged for ten minutes and the sediment smeared on a slide, dried, fixed in alcohol and stained with eosin-hematoxylin.

The authors claim a characteristic picture for each of the gastric diseases.

1. Normal—A few pavement cells of the mouth or esophagus, large, rectangular or polygonal, with small, dark nuclei; a small amount of debris. In cases of sialophagy these large cells with small nuclei are very numerous; they are usually covered with bacteria.

2. Dyspepsia—The same as above. Cystology here most useful in ruling out an organic lesion.

3. Gastritis—Pytologically, four types are recognized:

(a) Mucous Gastritis—Characterized by an abundance of mucous; frequently yeast cells.

(b) Hypergenetic and Desquamative Gastritis—Very numerous, small, rounded polygonal cells; protoplasm is indistinct, granular, pale eosin color, and frequently escapes from the cell borders. Nuclei are relatively large and deeply stained blue. Differentiation between chief and border cells is impossible.

(c) Diapedetic Gastritis—Characterized by the large number of leucocytes, polymorphonuclear, eosinophilic and lymphocytic.

(d) Congestive Gastritis—Large number of red blood cells are present, besides the leucocytes. The red blood cells are dispersed, and pale, in contrast to the findings in ulcer, in which rouleaux formation and fresh, bright blood cells are seen.

In general, the findings of the authors tend to increase the number of cases of gastritis at the expense of the dyspepsia cases.

4. Ulcer—A few small epithelial cells, many polymorphonuclear cells, and a variable number of red blood cells. Infected ulcers give a larger percentage of leucocytes. The process of healing may be followed by the disappearance of this cystological formula.

5. Cancer—Pyloric tumors give cylindrical and elongated cells; those of the fundus and borders, small round and polygonal types. These latter have an indistinct protoplasm, light though large nuclei. The whole cell is smaller in size than a leucocyte.

Cells from colloid carcinomata show vacuolated protoplasm taking strong eosin stains.

Infection of an ulcerating growth is easily identified.

The Significance and Treatment of Retained Placental Remnants.—Winter (Monatschr. f. Geburtsh. u. Gynak) in studying the relation between retained pieces of placenta and puerperal infection, concludes as the result of an extended series of observations that such remnants usually do not produce either local or general pathognomonic conditions. The symp-

toms which appear in connection with the retention of such remnants are local inflammatory processes in the endometrium, associated with disintegration of the placental remnants. He says that the latter per se are never the cause of severe puerperal infection but that the associated rise of temperature is the result of direct infection from examinations or operative interference, although it is probable that the retained secundines favor the severe infection. Winter claims that the exploration of the interior of the uterus with the finger in the hope of locating a retained piece of placenta as the cause of puerperal fever is unjustified and should not be undertaken on account of the associated dangers. Active interference in such cases is followed in from one-half to two-thirds of the same in a more or less severe process which in from 7 to 9 per cent. is fatal. The clearing out of the uterine cavity seems particularly dangerous in hemolytic streptococcal infection. Spontaneous expulsion of the placental remnants is quite free from danger and in only exceptional instances does the fever remain. Even where these have been retained for a prolonged period, the maternal tissues and rarely the blood are involved in the infectious process. From his personal experience and the results of the cases reported thus far in the literature, Winter believes that a search for retained placental remnants should only be made in the presence of hemorrhage and is not indicated by fever. However, if such a retention is recognized at the time of labor the same may be immediately removed and if diagnosed during the puerperium with certainty and any fever is present, it may also be extracted. If severe hemorrhage occurs the uterus should be cleaned out even in the presence of fever. If a spontaneous expulsion does not occur, the further treatment depends entirely on the result of the bacteriological examinations and if only saprophytic organisms are present the uterus may be cleaned out. On the other hand if virulent bacteria, especially hemolytic streptococci are diagnosed, further active treatment must be stopped and the spontaneous expulsion or disappearance of the virulent germs waited for. If an involvement of the peritoneum, parametrium, or the adnexa is found, a conservative procedure must be followed, and only in the presence of hemorrhage is a careful removal indicated. Sharp instruments should not be employed in these conditions but the result secured with the finger as a curet.

Treatment of Vincent's Angina With Salvarsan.—Achard and Feuillie (*Bulletins et memoires de la societe medicale des hopitaux de Paris*) report a case of Vincent's angina in a young man, in which salvarsan was applied locally on the same day that the condition was first noted, the early symptoms being dysphagia, glandular enlargement beneath the angle of the jaw, and thirst. Examination of the grayish exudate discovered in an ulcer on the left tonsil, revealed numerous spirilla and fusiform bacilli, and a few large diplococci. Salvarsan was applied by means of tampons impregnated with glycerin and dipped in the powdered drug. Only a few hours later deglutition could be effected without discomfort. Next day the lymphatics were no longer tender. A second application of the drug was made, after which the patient failed to return, considering himself cured. Six weeks later, however, recurrence took place. A single application of salvarsan was made, and the patient did not return for a week. At this time, although no more grayish exudate was to be seen, examination of mucus from the tonsillar surface still showed fusiform bacilli and fine spirilla in small numbers. Complete recovery, from the patient's standpoint nevertheless followed. The case illustrates, 1, the remarkable rapidity of action of the drug in cases taken early, and, 2, the fact that even in recovered cases the microorganisms may be "carried" for an indeterminate period. The local applications of salvarsan should consequently be continued for a time after apparent cure, in order to complete the destruction of the germs and prevent recurrence or infection of other persons. Netter, in the discussion, stated that applications of one in 30 solution of salvarsan in glycerin had appeared to him preferable to the use of the powdered drug.

Treatment of Acute Mercurial Poisoning.—Castaigne, (*Quinzaine therapeutique*) refers to a case of hepatic cirrhosis with ascites in which, anuria supervening after the ingestion of four grams of corrosive sublimate an attempt was made to procure elimination of the poison by evacuating the ascitic fluid. This was effected daily for eighteen successive days, the fluid withdrawn being each time replaced by an equal quantity of normal saline solution. On the nineteenth day, anuria having persisted all this time, the urinary flow became reestablished, and the patient soon recovered. Two other patients poisoned with bichloride were subjected to nephrotomy and renal decap-

sulation. One recovered, after three days of anuria, but in the other anuria persisted, causing death. While no conclusion can be reached from these cases, recent work has suggested that operation will frequently prove useless because it does not relieve organs other than the kidneys that are impaired by the poison. If operation is rejected, detoxication can be secured, or at least attempted, by repeated bloodletting to the amount of 100 to 150 grams (3 to 5 ounces), followed by intravenous injections of normal glucose solution, which will tend to stimulate the hepatic and renal functions. Renal organotherapy, in the form of injections of goat's blood serum obtained from the renal veins, also affords a possibility of favorably influencing elimination by the kidneys.

Serum Diagnosis of Pregnancy and of Cancer.—Leitch in *The British Medical Journal* gives the details of 100 cases examined to test the method in the diagnosis of cancer. The doctor employed a large number of different substrates, obtained only from good cellular tumors removed at operation. These included several epitheliomata, carcinomata, placentas, a rodent ulcer, etc. All of the substrates, with special exceptions, were most carefully prepared and washed most thoroughly. Of the hundred cases tested to prove the value of the method of serum diagnosis in cancer, fifty-one were cancer cases, the remaining nonmalignant. In the cancer cases there were positive results in twenty-eight, or fifty-five per cent., and in the nonmalignant cases there were eighteen positive results, or thirty-seven per cent. "The method, therefore, is without diagnosis value." He says: "It is necessary, in view of the adverse results here obtained, that contrast so strikingly with those of the brilliant and deservedly honored originator of the theory and with those of his numerous disciples in all parts of Europe and America, to search out the factors that led to the amazingly mistaken claims, as I consider them to be, and to show as well as I can, that my own results are not due to errors of technic or to biased misunderstanding. It seems to me that the theory originated from the readings of some preliminary experiments. It may be that those readings unconsciously exaggerated the facts; the fundamental observation were not made sufficiently indubitable for a great structure to be reared upon them; and the observer, having satisfied himself that a certain result was to be expected, and knowing exactly what he had to deal with when identical experi-

ments were repeated, could not avoid obtaining readings similar to the original. If the repetition of the experiments was intrusted to a disciple, as it probably was in a busy laboratory, there should be the greater chance of the original views being substantiated. Whether or not that be an ungenerous supposition, the fact remains that the fundamental experiments do not cover a sufficiently wide field, and it is obvious that a great jump was made from serum reactions to substances quite foreign to the animal body, to serum reactions to substances natural to the body." In the first place it is impossible to wash the organ, substrate to a snow white, as each organ has its definite color, usually cream color, after the most thorough washing. If the water in which the organs were boiled is tested with one c. c. of ten per cent. ninhydrin solution and fails to give a reaction, it will often be found that it will react to five c. c. of the solution. The reverse is also often true, that a faint reaction may be obtained with one c. c. and none at all with larger amounts, thus ninhydrin may fail to detect the presence of protein products because it is too strong as well as because it is too weak. Once the tissue yields a colorless water, if it is allowed to stand, color reaction may again be obtained after a few hours or longer. Some tissues are much more unstable in this respect than others. The fallacy supposed to be introduced by the presence of blood in the tissues does not exist, for even pure blood clot prepared as a substrate reacted negatively. When pieces of sterilized sponge, kaolin, or glass wool were used as substrate seven positive results were obtained in thirty-nine serums tested. The mere presence of hemoglobin in the serum does not, as usually stated, give rise to positive ninhydrin reactions. Blood drawn close to a meal also does not show a greater tendency to yield positive results than blood taken in the fasting state. The serum itself is unstable and splits up with the liberation of substances reacting to ninhydrin as shown by the removal of such substances by dialysis and their reappearance on standing but a brief time. The decomposition may be so rapid that it is impossible to remove these substances from serum completely. The dialysing membranes are remarkably variable in their permeability; the only way to obtain reasonably reliable results from these is to manifold the experiments. A further remarkable fact is that if the substrate and serum are each put into a separate dialyser and dialysed separately, the dialysate will probably be negative in both instances, but if

they are dialysed in separate sacs but in the same water, the reaction may be positive. "The conclusion to which I have come after a careful investigation of Abderhalden's dialyzation method are that the real fallacies of the technic are beyond control, and that the hypothetical fallacies which Abderhalden invoked to account for false reaction have no basis. Positive results are quite well accounted for by the facts that the substrate alone, and the serums alone, give diffusible substances reacting with ninhydrin; that the dialysers vary enormously in the quantities of such substances which they allow to pass in a given time; that serums, influenced by the distilled water and by the presence of a tissue acting in virtue of its physical states, are progressively cleaved; and that it is not the substrate which is split by the serum so much as the serum which is split by the substrate. These very real fallacies quite destroy the value of the method, and they cast grave doubts on the whole theory."

Molding of the Fetal Skull in Deformities of the Pelvis.—Walcher (Zentralbl. f. Gynak.) calls attention to the well-known fact that labor in cases of narrow pelvis is apt to terminate more quickly in primiparae than in multiparae. It has been assumed that the smaller child in the primipara is the cause of this, or the greater frequency of vertex presentations due to the more rigid soft parts and the more muscular uterus. Another factor is, however, of importance to which attention has rarely been called, viz., that in cases of narrow pelvis, the head is often found deeply engaged in the pelvis toward the end of pregnancy without labor pains having been present. Walcher found that in the majority of cases where the head was not engaged six weeks before labor, where narrow pelvis was present, it was invariably firmly engaged at the time of admission. In such cases the expulsive stage was usually rapid and very little overriding of the fetal skull bones was present, although the shape of the skull might have been very much changed and represented in its cross-section the exact shape of the pelvis. He assumes that this may be explained by the fact that the skull of the child during the latter weeks of pregnancy has assumed the shape of the pelvis during its engagement. In such cases, moreover, no depressions were

Nervous Disease of Elementary School Children.—Priestley (Brit. Jour. Child. Dis.) these remarks are based on the records of 62,236 children in elementary schools medically inspected from 1909 to 1911. There were 31,352 boys and 30,884 girls. In only two complaints, viz. chorea and headache, are more cases recorded against girls than against boys; and in chorea the predominance may depend on the predominance of rheumatism among girls. In functional disorders boys and girls are approximately equal; but in every other nerve complaint all the serious ones, mental dulness and defect, stammering, paralysis, epilepsy there is a marked preponderance among boys. An explanation of his unequal incidence of nervous disorders in boys and girls, as regards mental dulness at least, has been sought in the fact that the brain in girls ceases to grow in weight at about the age of seven, while in the cases of boys it continues to grow until puberty. A still growing brain might be supposed to be more liable to derangement than one which has ceased growing. To put this to the proof we ought to contrast boys and girls at age five to six while the brain is still growing in both. In the statistics studied children are not classified for dulness or mental deficiency until they are about eight years old; but it is possible to contrast them in regard to all the other important nervous complaints. Headaches for obvious reasons should be left out of the calculation; it is difficult to judge of headaches at age five to six; but taking all other cases of nervous disorder together—stammering and defective articulation of speech, spasmodic and paralytic affections of childhood, epilepsy, chorea, functional disorders, and asthma—we find that 12,837 boys of five to six showed 601 cases of disorder, or 468 per 10,000, while 12,437 girls of five to six showed only 431 cases of the same disorders, or 346 per 10,000. Clearly the relative immunity of girls is not entirely, if at all, dependent on the earlier cessation of growth of the brain.

Oil of Turpentine in the Treatment of Puerperal Sepsis.—Cramer (Monatschr. f. Geburtsh. u. Gynak.) says that for the past ten years he has used the oil of turpentine in the local treatment of puerperal infections, employing the undiluted official oil in the form of a tampon to the infected mucous membrane of the vagina and wiping out the cavity of the uterus likewise. The absorption of the oil is very slight and the writer claims that no unfavorable symptoms are observed. In all

cases it is necessary to completely free the uterus of all placental and decidual remnants, avoiding a sharp curet. The results in a considerable series of cases are presented and even where sloughing has already occurred, the healing process is favored. Also employs the oil of turpentine in gynecological treatment, especially in the presence of cervical and vaginal infection with streptococci and staphylococci. It also serves as a satisfactory prophylactic for disinfecting the vagina previous to abdominal hysterectomy for carcinoma.

Eye Changes in Pregnancy and Labor.—Adam (Monatschr. f. Geburtsh. u. Gynak.) discussing the subject of retinitis in pregnancy, presents the results of his observation in ninety-two cases of eclampsia of which forty-four presented visual disturbances. Only four of the latter presented evidences of a retinitis and here the excretion of albumen continued after delivery; whereas, in the other cases it diminished rapidly. In the majority of the cases complete amaurosis and in a smaller number a well-marked amblyopia was present. In all cases a prompt reaction of the pupils was present, showing that the disturbances were probably cerebral in character although the ophthalmological findings were normal in thirty-six cases. Exophthalmic changes were noted in four cases which were somewhat unusual. These consisted of dark spots in the fundus near the periphery in which one or two retinal vessels were prominent. Subsequently these prominent vessels were surrounded by a translucent area in the pigment layer of the choroid and subsequently a circumscribed area of sclerotic vessels resulted, such as are often found as a consequence of syphilis or arteriosclerosis. In one of these eyes the author found at autopsy extensive retinal hemorrhages and numerous thrombi. The author believes that the more sudden and intensive the visual disturbances, the more favorable the prognosis as to later recovery.

Acute Pancreatitis: A Clinical Study of Seven Cases; Five Treated by Operation Successfully.—Barker (London Lancet) says that few surgeons can claim to have had any very large experience in this disease as a field for operation, and fewer still to have had much success in dealing with it. This may be best explained by the great difficulty in diagnosing pancreatic affections, owing to the variety of clinical features that they present in their several forms and the suddenness of the attacks. We are still in need of a clear clinical pic-

ture of the symptoms of acute pancreatitis and of definite guiding principles in operating for it. In 1898 Korte reviewed the whole literature of the subject and stated that as to any characteristic symptoms and signs of acute pancreatitis, no advance had been made since Claessen, in 1842, had expressed the opinion that "there were none." Since 1898 these cases have been more carefully studied and some advance has been made. Nevertheless, the obscurity which hangs over these sudden attacks is very great, and definite, characteristic, diagnostic signs are still lacking.

That there are several different forms of the disease is now well known; but whether these (most probably, if not positively, all directly or indirectly infective) differ simply in the virulence or duration of infection with the same organism, or whether they depend upon inoculation with totally different bacteria, alone or combined, displaced secretions such as bile, or the succus entericus from the duodenum, we do not know, in spite of much pathological and experimental study. We do know that there is a chronic pancreatitis lasting a long time without immediately threatening life, and presenting few, if any, marked symptoms until the organ is gravely compromised by interstitial fibrosis; also that there is an acute inflammation of the organ associated with the escape of much blood into its substance and around it (acute haemorrhagic pancreatitis); that there is a more localized suppurative form producing one or more distinct abscesses in the organ; and, finally, that there is a fulminating form, in which, if the patient survive the severe shock of the onset, a very extensive and rapid sloughing of the organ and surrounding tissues gives a peculiar character to the process. What relations these several varieties have to one another is not yet clear. These different clinical varieties should be borne in mind, for the operative procedure must be modified to suit the individual type. It is one thing, for instance, to deal with a limited acute inflammation of the head or tail of the pancreas which has reached the omental sac and can be approached and drained through a median incision into this; it is quite another to attack a destructive process early which lies behind the peritoneum, is spreading in the retroperitoneal and mesenteric tissues, and has either already resulted in sloughing there or may be expected to do so ultimately. In the latter case an anterior incision and draining of the omental sac will not be adequate and a lateral one in the flank should be made to give access to the retroperitoneal area around the pancreas by bur-

rowing behind the serous membrane, as was done in two of these cases and was suggested by Korte long ago. From the author's experience and observation he feels that immediate and prolonged retroperitoneal drainage of the fat around the organ would appear to be the rational treatment.

Of the seven cases forming the basis of study in this paper, he operated successfully upon two, while the others occurred in the services of his colleagues in the University College Hospital, three being successfully treated by operation, one fatal after operation, and one fatal case not operated upon. Autopsies were secured in the two fatal cases. The clinical course of these cases is given in considerable detail, and those who are especially interested in this subject should not fail to read the entire article, since it is not possible to adequately abstract that really vital portion of the paper.

He says that looking at this group of cases and endeavoring to construct from them a clinical picture which may be of use in the future, one is first struck with the fact that in three the patients described similar attacks at long intervals antecedent to that for which they sought surgical help. In Case 2 there were two, one six years, and one six months before the last; both after normal childbirth. In Case 3 there was one attack nine months previously, described as quite similar to the last. It was not related to labor. In Case 4 the patient, a male, described three illnesses of the same kind, the first five years before (in bed eleven weeks) the second four years before and the third three years before, at which time he was confined to bed for one week. In Case 1 the attack may have been his first; but there is a history of very severe abdominal pain and shivering some months previously, causing him to roll on the floor and lasting for some hours, which may have been an illness of the same nature but not so deadly. If the present attack was the first, that and the fact that it was taken in hand early may account for the more limited area involved around the much swollen and inflamed pancreas. The sac of the omentum was empty, but there was extensive fat necrosis in the retroperitoneal tissues but no sloughing at the moment of operation. This took place later. Another point noted as regards past history was that in two cases (Nos. 1 and 4) there was much gastric trouble for some time previous to the attacks; and in No. 2 the teeth were in very bad condition, which, as we know, is usually associated with stomach derangement. In No. 3 the patient stated that she was subject to "fre-

quent biliousness" before her attack. In none of the cases was there anything in the history to suggest derangement of the biliary apparatus except doubtful jaundice in a previous attack in Case 2; nor at the operations was anything wrong found with the gall bladder. In Case 1 I opened it simply as a possible means of relief for the inflamed pancreas. The bile, which was drained through a tube into a bottle, was perfectly normal for twenty-four days. It was, however, of very great interest to note that at about the time when the exacerbation of symptoms followed by tetany came on (thirtieth day) the previously clear bile became turbid, and a considerable sediment of pus was found in the bottle for about a week. From the improvement which followed on this, both in the general condition and in the bile, it seems clear that this pus found its way from the inflamed pancreas into its duct, then into the common duct, and thus into the gall bladder. In Case 6 there was no time for actual destructive change in or around the organ. The patient was killed outright by the shock of the onset within a few hours and before any surgical relief could be undertaken. Case 5, too, had not advanced to sloughing. Case 7 was precisely like Case 1 but not so severe.

The onset of the attack in all these cases was strikingly sudden except in Case 3, in which four weeks of "pain after food" elapsed before the condition was thought grave enough to call for admission to the hospital. In the others, except for indefinite gastric disturbance, sudden severe pain in the epigastrium was the first and most prominent symptom. This was always described as very intense, and in Case 1, where I had the opportunity of seeing the patient very early, the powerful man appeared to be suffering horribly and was pallid and markedly cyanosed. This cyanosis lasted some days after operation. In Case 6 the suffering was very severe and accompanied by extreme cyanosis and collapse which rapidly ended in death.

The temperature in all cases was relatively low at the onset. In Case 6 it was 97.1 F., indicating severe shock from which the patient died before any operation was done. The pulse was rapid and was gradually increasing while losing tension. Vomiting was usual at the onset of these cases, not so prominent a feature later. The material brought up was usually bilious with mucus. In no case was a tumor found in the region of the pancreas without an anæsthetic. In one case only was one discovered just before the operation when the an-

æsthetic had been given.

On opening the abdomen turbid peritoneal fluid was found in three cases at operation (and in one not operated upon but at autopsy) in considerable amount. The intestines were injected and dilated in four out of the five cases operated upon, but not paralyzed. They had not the appearance of being actually inflamed, their lustre being unimpaired, and showing no lymph upon them; but lymph was found in three cases in the neighborhood of the pancreas.

From the character of the discharges coming from the inflamed gland there was only evidence of hæmorrhage into or around it in three. Perhaps the grumous fluid which came away with sloughs in Case 3 indicated broken down clot; but it is hard to say as the operation was performed four weeks after the onset. The attack was probably less acute than in the other instances. The omental sac was opened in all the six cases operated upon, but only in three had the destructive process made its way into it.

As the disease becomes better understood and is dealt with in its earlier stages better things may be expected.

Attempts at Cure in Two Late Cases of Syphilis.—Lomer (*Allegmeine Zeitschrift für Psychiatrie*) reports two cases, both of which were treated by intravenous injections. The first was originally diagnosed as paresis, this diagnosis being abandoned for that of cerebral syphilis. A Wassermann test was not made until after the patient had had several intramuscular injections of salvarsan. When it was made the reaction was negative. The patient did not improve either under intramuscular salvarsan, old tuberculin, or sodium nucleinate, but under salvarsan intravenously recovered sufficiently to be discharged and return to work. He lapsed into excesses and had a sudden relapse from which he passed into a quiet demented condition. The second case was one of general paresis. The patient made no improvement under injections of sodium nucleinate, but as a result of them had an exacerbation of an inflammatory process at the apex of one lung, and developed an eruption upon the chest, which the author regarded as a sort of Herxheimer reaction. This eruption disappeared under intramuscular salvarsan, and the patient's general condition improved, but his mental powers were not restored and he also passed into quiet dementia.

Gastroenterostomy: Experimental and Clinical.—Scrimger, Archibald, and Pire (Canadian Medical Association Journal) as the result of a laboratory and clinical study of this subject say that the anastomosis in the cardiac portion, with the pylorus open, will, as has been observed by others, allow most of the food to go by the pylorus. It will afford no protection to an ulcer in that situation. More than this, in dogs at least, most of the food leaving by the pylorus reenters the stomach through the anastomosis, and the animals will not do well; they vomit and grow thin.

That the addition of the exclusion of the pylorus will protect an ulcer, but will not greatly improve things otherwise. The stomach will fail to empty. The animals will vomit and grow thin.

That the placing of the stoma in the pyloric portion improves matters enormously. Here food will pass out by the stoma chiefly, though partly also by the pylorus if open. If an ulcer is present, it can be efficiently protected by excluding the pylorus. In both cases the animals do well.

That if an ulcer is found proximal to the pylorus anywhere in the pyloric portion, it can still be protected by laying a fascial ligature around the stomach between it and the anastomosis; further, that in animals at least an anastomosis placed in relatively the same position as that necessarily used in the human, if a short-loop operation is done, is much more efficient when the fascial ligature is applied immediately distal to the stoma than when placed at the pylorus.

What is the reason for the inefficiency of the stoma placed in the cardiac portion and its efficiency when in the pyloric portion? The answer, they think, is to be found in the observations of intragastric pressure made by v. Pfungen, Kelling, Cannon, and others. They proved the pressure in the cardiac portion during digestion was low, but strikingly constant, variously estimated at from 6 to 16 cm. of water, while in the pyloric portion it is intermittently high, estimated at from 60 to 120 cm. of water, during active peristalsis.

The cardiac portion is practically without peristaltic activity; its function is to maintain by tonic contractions a constant low pressure. The pyloric portion is strongly peristaltic; its muscle rhythmically develops relatively great power. The low pressure in the cardiac portion is insufficient to force food out of the stoma so long at least as there is an easier path into the pyloric antrum. The high pressure in the pyloric end will force the food rapidly through any opening that is available.

Gall-Stones and Gastric Juice.—Aldor (Wien. Klin. Wochenschr) says that cholelithiasis may occur with hyperacidity, subacidity or normal gastric acidity. Its non-surgical treatment should depend primarily upon the gastric findings. The gall-bladder is not a mere reservoir but exerts reflexly a definite influence upon gastric secretion. Thus it has been found that extirpation of the gall-bladder is followed by permanent gastric sub-acidity or anacidity. Accordingly, the gastric subacidity that is so frequent an accompaniment of cholelithiasis may be due to either of two causes, a reflex from the gall-bladder or a chronic gastritis. The latter condition is characterized by the presence of much mucus in the gastric contents and by a progressive fall in the amount of hydrochloric acid present. Such patients usually do not have extremely violent attacks of colic, but, on account of their gastritis, are never entirely free from pain. Dietetic indiscretions usually lead to a paroxysm. The other group of cases is usually due to a coli infection of the gall-bladder without gastric involvement. The attacks of colic are here very severe but with symptom-free intervals. Mucous colitis with constipation, diarrhea, meteorism, etc., are common. Therapeutically both groups of cases demand a diet consisting of milk, eggs and vegetables. Hydrochloric acid may be given by mouth and large quantities of water per rectum. Gastric lavage is indicated only in the cases complicated by gastric catarrh.

Occult Blood in Gastric Ulcer.—Boas (Deutsch. Med. Wochenschr) says that the most important sign in the diagnosis of gastric or duodenal ulcer is the presence of occult blood in the stool. A persistently positive reaction, in the presence of the usual symptom-complex, proves the existence of a florid ulcer; a constantly negative blood test speaks against the presence of an active ulcer but not against the existence of a healed ulcer, with all the sequelæ that come in its train. For these tests the old guaiac or benizidin tests are not sufficiently delicate. The phenolphthalein test, according to Boas, is the only one capable of showing the presence of minimal traces of blood in the feces. By its means an early diagnosis is made possible and relapses can be recognized with certainty. The combination of the test with an oil breakfast enables one to distinguish between gastric and duodenal ulcer. The gastric contents having been found free from blood, a number of ounces of olive oil are put into the stomach. Thereby a regurgitation of duodenal contents into the stomach is brought about,

The oil is then expressed through the stomach tube and tested for blood. A positive reaction speaks for duodenal ulcer, provided the stomach tube was manipulated so gently as to minimize the possibility of traumatic bleeding.

Low Blood-Pressure.—Cornwall (New York Medical Journal) says from his observations on low blood-pressure it is possible to draw a few conclusions, positive or tentative, as follows:

1. A low systolic pressure, provided the diastolic pressure is correspondingly low, does not necessarily mean poor circulation, although it does imply a diminished reserve power of the circulation.

2. A low systolic pressure with a comparatively high diastolic pressure, and a consequently small pulse pressure, usually means myocardial weakness with chronic nephritis, arteriosclerosis, or arterial spasm, and may be bad prognostically.

3. A low diastolic pressure with a comparatively high systolic pressure, and consequently an excessively large pulse pressure, may mean several things—e. g., a purely functional condition, a compensated aortic regurgitation, myocardial degeneration without arteriosclerosis or nephritis, toxicemic irritability of the myocardium, or vasomotor dilation from any cause.

4. The diastolic pressure seems to be more stable than the systolic, and to show, less often than the systolic, marked variations from its normal without definite pathological cause; and the systolic pressure seems to accommodate itself to the diastolic more easily than the diastolic to the systolic. The diastolic pressure indicates the peripheral resistance, which in many cases is determined by permanent pathological conditions. Movements of the diastolic pressure beyond the normal health range cause the pulse pressure to take on an overload if an adequate circulation is kept up.

5. Vasodilator drugs may improve the circulation by increasing the pulse pressure.

6. Cardiac depressant drugs may lower the diastolic pressure by diminishing the systolic force and calling for a pulse pressure overload.

7. Toxemias, both acute and chronic, can produce low blood-pressure by dilating the blood-vessels and by weakening the myocardium, but the greater part of their effect in the larger number of cases is probably produced by vascular dilation, either through the vasomotor center or locally.

8. Chronic tobacco poisoning is a very common cause of persistent low blood-pressure.

9. It is possible for a patient to live for

several hours with a systolic pressure below 60, and for several days with a systolic pressure below 70, and to walk around without particular symptoms of circulatory distress with a systolic pressure of 90, provided the pulse pressure is sufficiently large.

10. The pulse pressure in health usually ranges between 30 and 45; and pulse pressures as small as 20 or as large as 60, if persistent, may be considered pathological.

11. A systolic of 100 or lower in an adult usually calls for treatment.

12. Shortly before death partial asphyxiation may cause a sudden, transient rise in the blood-pressure.

13. A fall in the systolic pressure in response to an exercise test, immediately, or after a short preliminary rise, and a delay in its return to the normal, while lacking positive significance, suggest the existence of myocardial weakness, as does also a failure of the pulse pressure to show a substantial increase in size in response to such a test.

14. The neurotic factor in the patient and the personal factor in the observer may require a considerable allowance to be made for them in the interpretation of blood-pressure findings; and the clinician must constantly guard against being misled by blood-pressure findings, and especially against ascribing too much importance to them when not supported by other evidences of disease.

In the treatment of low blood-pressure, concerning which only a few words will be said here, removal of the cause is, of course, the first duty. If the cause is a chronic toxemia it can very often be removed or lessened, and this is particularly true of intestinal toxemia. The removal of chronic tobacco toxemia is possible but often difficult.

An essential element in the treatment of low blood-pressure is rest. To what extent physical, mental and emotional activity should be restricted depends on the effectiveness of reserve power which the heart possesses. Patients with chronic myocardial degeneration, whose blood-pressure is comparatively low and who have symptoms of circulatory insufficiency on slight exertion, may require to be kept very quiet, though many of them may be permitted to walk around, avoiding stairs and speed. In persistent low blood-pressure following typhoid fever or any of the acute infections, prolonged rest in bed is necessary.

If there are definite signs of circulatory insufficiency, heart stimulant drugs may be called for, and the drugs of this class which the writer has found most generally useful are strychnine, strophanthus, and caffeine.



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Digitalis may be of great service in cases with low diastolic pressure and a fairly healthy myocardium, but that drug is contraindicated in cases with myocardial degeneration and a relatively high diastolic pressure.

In cases with severe, sudden failing of the diastolic pressure due to toxemia vasomotor dilation, adrenalin and pituitrin seem suitable agents to use. The writer has had little experience and not much success with those agents.

In cases of low blood-pressure due to severe hemorrhage, the rapid introduction of a normal saline solution into the circulation is called for, and also elevation of the lower part of the body.

In some cases with a relatively high diastolic pressure and a small pulse pressure, nitroglycerin may prove useful by enlarging the pulse pressure; but nitroglycerin is absolutely contraindicated in cases in which the diastolic pressure is low.

The clinical study of blood-pressure, in spite of the seeming inconsistencies and contraindications which it discovers, promises much for internal medicine; and the sphygmomanometer is a clinical tool which seems destined to be accepted on terms of equality with the thermometer and the setethoscope. Especially fruitful is likely to be the study of the diastolic and pulse pressure; for in the absolute and relative variations of the diastolic and pulse pressures the clinical significance of blood-pressure findings is chiefly revealed.

Miscellaneous.

Acute Miliary Tuberculosis; Primary Disease in Female Genital Tract.

Kubingi (Zentralbl. f. Gynak) recently discussed at a meeting of a society in Budapest the question of primary tuberculosis of the uterus and appendages and its possible diffusion. He reports a case where this complication, in his opinion, followed an abortion. The patient was twenty-six; she had married when fifteen years of age, and had suffered from long ill health after an abortion at the fourth month. She became pregnant again and aborted in the middle of the third month. Feverishness followed, and she was admitted into hospital. The uterus was enlarged and the appendages swollen. Hard infiltration, clearly of old standing, was detected in the posterior fornix. Rigors set in, with the physical signs of pleuropneumonia and pyaemic changes. Extreme dyspnoea and cyanosis developed, without any cerebral or

mental symptoms. Death occurred on the forty-fifth day after admission. At the necropsy, old-standing tuberculous disease of the uterus and tubes was discovered, and acute miliary tuberculosis of the lungs. Scipiades, in discussion, observed that Kronig denied that absolutely isolated genital tuberculosis without isolated foci elsewhere had ever been authenticated at a necropsy. The bones in particular were often entirely overlooked. Von Kubingi replied that some living authorities thought otherwise. When all surgeons and physicians could demonstrate the existence of primary tuberculosis in almost every other part of the body, it seemed strange that so well known a disease as tuberculosis of the Fallopian tube could never be primary. No doubt tubercle bacillie might be concealed in an enlarged gland or in an old scar, overlooked by a clinical reporter, but still the lungs, kidneys, and other organs were undoubtedly the seat of primary tuberculosis, and nobody urged that in every case there might be an overlooked primary focus. The evidence that primary tuberculosis of the internal organs might occur was very strong, and there could be no doubt that tubercle in the uterine appendages often extended beyond the genital tract.—The British Medical Journal.

Medical Certificates.

Collie states that medical certificates in legal cases should always be given with great caution. What should one do when asked to examine an injured person by both employer and employee, or by two parties to a suit in an action at common law? There is a general impression that, having given a certificate to one side, it is disloyal—indeed, dishonorable—to fish, as it were, on both sides of the stream, and furnish a report to what the lawyers call the “other side.” This attitude assumes a very low standard. If one has given a certificate for a plaintiff which exaggerates his injuries, or if acting for the defendant, one has given a certificate minimizing what exists, obviously it would be impossible to report on the case to the opposite party to a suit. Medical men are not partisans in law suits; unlike the attorney, they have no “other side” to consider. Solicitors and barristers are paid to make the best case they can for their client. The doctor certifies facts as found, or should do so. There is, therefore, no reason whatever why a certificate should not be furnished to both parties and a fee charged to each. Of two things, however, one must be scrupulously careful. First, the facts must be presented in exactly the same way in both instances. Indeed,

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the safest plan is to make the second report a copy of the first. Secondly, both parties should be acquainted with the fact that such a duplicate has been issued. Loyalty demands this. It is always advisable to retain an exact copy of all letters and reports on medico-legal cases.—British Medical Journal.

Automobiles and Railway Fatalities.

Despite all we hear about the death-toll of our railways, it seems that as instruments of destruction they are hopelessly outclassed by the automobile. This fact is demonstrated by statistics compiled by Frederic Rex, municipal reference librarian of Chicago, who finds that in 1912 the number of persons killed by automobiles in twenty-two American cities having 100,000 or more population was 691. These figures move The Railway Age Gazette (New York) to point to the railway fatalities of the same year—the number of passengers killed in all ways on all the railways of the United States during that period being only 270. Says the railway organ:

"In other words, the number of persons killed by automobiles in only twenty-two cities was 64 per cent. greater than the total number of railway passengers killed. It was likewise five times as great as the number of passengers killed in train accidents alone, which was 139; and it was greater than the number of passengers, railway employees, and all other persons, excepting trespassers, killed in all railway collisions and derailments, the total killed in collisions and derailments, excepting trespassers, being 685. The largest number of passengers ever killed in all ways in one year on the railways of the United States was 647, and yet this worst of all records, which was made in 1907, was forty-four less than the number killed in automobile accidents in 1912 in the twenty-two cities.

"The accident record of the railways is being used by some writers as an argument for their acquisition by the public. It is assumed that if the public owned them it would operate them safely. The public already owns the streets and highways, and these figures regarding automobile accidents indicate how safe it makes them."—The Literary Digest.

Overhauling the Automobile.

H. Massac Buist states that motor cars are curious things, in that as far as matters of habit go they seem to be alive. Thus a car may work quite reliably day after day for weeks at a spell, doing a given series of rounds, calling a halt every mile or two, as does the average doctor in the exercise

of his profession. But if the same car be asked to go fifty or seventy miles without a halt it is ten to one that some minor part of the mechanism fails in the most annoying manner, leading to a breakdown involving a loss of hours. Reparatory to a lengthy run the machine will want looking over in a more special fashion than is done ordinarily in connection with its daily work in the doctor's service. Under these conditions it does not go long enough at a spell to run any serious risk of damage even should there be insufficient oil in the back axle or gearbox, or lack of grease in the universal joints. In most such cases ample warning would be given by way of gradually increasing squeaking. Before starting out, however, all those points should be specially checked. It is besides as well to unscrew the valve caps and have a look at the condition of the engine's interior in regard to carbon deposit. Assuming, therefore, that the motor is clean and that it will be given a reasonable chance of keeping clean by drawing off the oil from the crankcase; that it has been replenished with new and clean supplies and is not suffering from loss of compression; and that all water connections and all other parts where leaks might occur have been looked over; a start may be made with a fair certainty of having no motor trouble. In regard to the chassis in general, apart from such ordinary attention as the filling of grease cups at regular intervals, one should pay particular heed to the universal joints in connection with the propeller shaft. It is particularly essential that the grease put into the joints at either end of the propeller shaft is adequately secured in the covering to those connections. If these parts are run dry, sooner or later a broken propeller shaft joint will be sustained, than which there is scarcely any form of motor accident more dangerous. If the fore end goes it drops like a pole, which the back axle has to jump. Brakes should be gone over, particularly with a view to ensuring that they are acting in an absolutely compensating fashion, the pull being equal on either back wheel. It is as well to take up any slackness of the steering and particularly to supply all steering joints with lubricant. Next, as the car stands in the garage the wheels should be checked for alignment. If a wheel be ever so little out of true tires wear in extraordinarily quick time. Runs longer than those usual in the execution of the doctor's daily work demand, also, attention to the tires. The medical man will save money by taking off all tires showing any appreciable wear, and replac-

ing them with new shoes before starting out on a run the length of which cannot be foreseen. The old shoes can be brought into use again afterward and worn to the ordinary limits. Attention to all of the above details is necessary from time to time even if no unusually long tour is contemplated. This attention is demanded as a measure of safety as well as of economy.—British Medical Journal.

The Common Enemy.

Among the various bacterial species none, perhaps, exact a greater morbidity from mankind than does the streptococcus. In the variety, severity, and sequelae of the pathologic processes it produces it stands preeminent among diseases producing bacteria. (Journal of Medical Research).

When one encounters a child, with an otherwise clean bill of health, giving a history of scarlatina, tonsillitis, earache, or some similar acute disease, and presenting well-marked septic endocarditic and arthritis, it is a pretty safe guess that one has to do with a subacute mixed infection derived from one or all of the diseases mentioned.

The more one sees of these after-cleps of acute diseases, the more one comes to regard them in the light of mixed infections, which attack chiefly the epithelial and endothelial tissues, wrecking their first and most violent havoc upon the first, which soon mend, and their second more deadly venom upon the latter, which are not nearly so quick to recover. Thus, by this backward process of reasoning, one comes more and more to treat these subjects of endocarditis, arthritis, plouritis and nephritis, of post-infections origin, and the rest or the train of sequelae, with Combined-Bacterin Van Cott, which often makes just the difference between dismal failure and brilliant success. Of course, one must be sure of his bacterin and the best way to insure himself and his patient is to specify Combined-Bacterin Van Cott (Abbott).

Exhaustive booklet "Biologic Products and How To Use Them" sent on request by The Abbott Alkaloidal Company, Ravenswood, Chicago.

Treatment of Postoperative Retention of Urine.

Pituitary extract employed in twenty-one puerperal and twenty-four postoperative cases of retention of urine with excellent results. By its use the author was always able to avoid catheterization. The injections were given deeply into the muscles. It was found that they are best



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given when the bladder is fairly full, and the patient distinctly feels the necessity of having it emptied. Injection of pituitrin is then almost always followed in five to ten minutes by an increased desire to micturate, which usually ends in a spontaneous evacuation of the bladder. Occasionally, however, this result is not obtained until a few hours. If an injection is given when the bladder is only about half full, the action is less marked, though distinctly noticeable; if the bladder is empty, there is no effect whatever. When once a voluntary evacuation had been secured, it was seldom necessary to repeat the injection, viz., in only 8 out of 45 cases.—Ebeler *Zeitschrift für gynäkologische Urologie*.

Case of Nicotine Poisoning.—Moll (La Medicina de Los Niños) mentions a boy twelve years old suddenly developed an abnormal taste for tobacco. He was soon smoking from ten to twenty cigars daily. Health began to suffer shortly, appetite disappeared, the boy became cross, disobedient and dazed. Reflexes diminished, sight was impaired, all movements became difficult. Tobacco was forbidden; rest, warm baths and massage soon removed all the symptoms of intoxication.

Eugenics, Euthenics, Hygienics.

Here we have three great words, words that have been formed from the greatest of all languages, the Greek. Eugenics has attracted much attention for some years, and deservedly so. The study of heredity is a study of vast importance, no matter whether we follow the Darwinian school, Daltonism, or that school of thought led so ably by Weismann. There is much in heredity, and the experienced breeder mates healthy animals. Eugenics means to be well born in the sense of good ancestry.

Euthenics on the other hand, deals with environments, and rearing. No matter what the heredity may be, the best may be blighted by bad environments, training, food and so on. In the same manner, much that is faulty by inheritance may be improved and elevated by favorable conditions. So then euthenics and hygiene blend themselves with the conditions that improve the human being after it has come into the world.

But right here euthenics and eugenics blend into the halves of a blessed pair. By careful and prolonged attention to euthenics the individual is vastly improved, both physically and mentally. This shows itself in the next generation. The euthenics of to-day is the eugenics of tomorrow. So then begin now and improve the growing child; for the child is father of the man, and the man is the father of the future child. How long this simple truth has lain dormant! The fact that it is so simple does not lessen its value, but to all lovers of true progress there is genuine pleasure to be found in the fact that so many distinguished persons are now holding a brief for the child.

When slums are abolished in cities, when schools are sanitary, when workshops are healthy, when children are properly taught, when they receive proper food, when they are supplied with proper clothing, and when the moral atmosphere in which they move and have their being is proper, then will there be true progress, and eugenics will be within our vision.—Canada Lancet.

Congenital Defect, Sixth and Seventh Cranial Nerves.

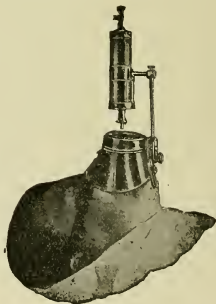
Smith reports the case of a male aged 3 years who was brought for weakness of one side of the face. This defect had been noticed since the second week of life. Delivery was moderately easy and no instruments were used. There was complete seventh nerve paralysis on the right side and also paralysis of the external rectus on the same side. The condition suggested a congenital defect of the sixth and seventh cranial nerves.—Proceedings of the Royal Society of Medicine.

Multiple Lupus Vulgaris Involving Skin and Mucous Membranes.

Pernet reports the case of a boy, aged 15, with a history of two years' duration. There were numerous patches and foci of lupus vulgaris scattered about the face and limbs, especially the legs. The disease had started on the right arm. The palate and nasopharynx were also involved. The boy was treated with the x-rays, and, in addition, tuberculin injections were given, owing to the involvement of the mucous membranes. The multiple lupus vulgaris lesions did not follow measles or other acute exanthem.—Proceedings of the Royal Society of Medicine.

The Anesthetic Dosimeter Inhaler.

The open-drop method of giving chloroform and ether is the most satisfactory method of inducing and maintaining perfect anesthesia. A great obstacle to those who use the open-drop method has been the non-existence of a simple and easily manipulated appliance to deliver the anesthetic liquid drop by drop without continuous adjustment. Since the even and regulated administration of the anesthetic liquid is an all-important factor for ideal anesthesia, Dr. Varela, an enthusiastic advocate of the open-drop method, in designing his Dosimeter Inhaler has fully solved the difficult problem of securing SIMPLY and ECONOMICALLY a continuous, uniform and easily controllable supply of the liquid anesthetic, with a maximum of safety for the



patient and a minimum of care, labor and inconvenience for the operator.

The automatic dropping device of the apparatus is cleverly featured to permit of ready adjustment and to deliver the liquid at any desired speed without requiring new adjustment unless a more or less rapid flow

is needed. It may be set to deliver for example, one gram of chloroform per minute, drop by drop, and the flow will not vary.

One hand operates the Dosimeter Inhaler. This feature is in itself of sufficient merit to render the apparatus of exceptional value in the busy operating room of the hospital, and makes it indispensable in minor operations and emergency cases.

A turn sets the nozzle to deliver in drops the amount of anesthetic desired. The surgeon can confidently entrust the Inhaler to his nurse, or anyone for that matter, to be held in place on the patient's face to continue anesthesia throughout the operation. The surgeon may feel assured that no more nor less anesthetic will be poured into the mask than he has set the nozzle to drop. The anesthetic is delivered drop by drop with automatic precision. When turning the patient's head during the operation the apparatus need not be removed. A simple and effective universal movement mechanism permits the anesthetic container to remain properly adjusted. If too much anesthetic is being supplied, the surgeon can simply nod to his assistant to screw back the nozzle a little; the supply is forthwith reduced, and vice versa.

The Anesthetic Dosimeter Inhaler Company, No. 132 Nassau street, New York, manufacture the device, which sells for \$20. They will send it on free trial to hospitals subscribing to The Modern Hospital.

Typhoid Cholecystitis.

Gall-bladder inflammation, in the absence of lithiasis, may produce the same symptoms and signs as occur in cholelithiasis. Thus in typhoid cholecystitis there may be no history of typhoid fever, no record of any exposure to infection, and yet serious illness result. In many of these cases the Widal reaction may be negative, and the course of the illness can only be cleared up by the operation and a bacteriologic examination. The symptoms in typhoid cholecystitis do not always refer to the gall-bladder. The chief symptoms are a feeling of malaise and sickness, with a slight evening rise of temperature (99.5 deg. to 101 deg. F.) and occasional attacks of pain accompanied by rigidity of the abdominal muscles, not always localized to any special area. These attacks, if severe, occur regularly every third or fourth day, are accompanied by vomiting and fever, and are followed as the temperature increase subsides by copious night sweats. If during the attack, or after the acute pain has passed away, muscular rigidity is not pronounced, the gall-bladder, sensitive to touch and more or less distended, can be palpated.—

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Morrison, in The British Medical Journal.

Care of the Eyes of School Children in Australia.

This from a report of the Ophthalmic Society of New South Wales: Dr. Willis, at the request of the chairman, briefly described what the government was doing in the way of examining all the school children attending the public schools throughout the State. These children would be examined once in every four years, and when found to need attention by the doctor or dentist were given a notice to that effect for their parents or guardians, or advised to attend a public hospital if they could not afford otherwise. Those in the outback country districts could not get to a hospital, and it was to meet such cases that the traveling inspector and hospital was being introduced. Then there were young adults who were examined on entering the training college, and as these only received a small salary they feared the expense of an oculist's fee, and found their way to sight-testing opticians, who charged them extortionate prices for testing and supplying glasses. To protect the examinees from being exploited by unscrupulous opticians, the government was contracting with certain opticians to supply spectacles at a lower price.—The Australian Medical Gazette.

Lactucarium in the Treatment of Opium Smokers.

Millan has found that this drug provides an effective substitute for opium in the treatment of those addicted to opium smoking. The extract of lactucarium is softened in the water-bath to a syrupy consistency and is then rolled into pills similar to the pills of opium used by smokers of this drug. When smoked in the pipe lactucarium produces a sedative effect similar to that produced by morphine. The preparations of lactucarium usually contain a minute percentage of morphine. This is no disadvantage in the treatment for the author does not break off the opium abruptly, but uses a slight admixture of it with the lactucarium, diminishing the amount, however, from day to day.—Le Caducee.

A Simple Method for the Intravenous Injection of Neosalvarsan.

Le Damany describes a modification of Ravaut's simple technique for the intravenous injection of neosalvarsan. The virtue of the latter method consists in the small volume of solution used, which may be 10 cubic centimeters or even less. In order to avoid displacement of the needle in the vein while the piston is pushed home, the author interposes a piece of red rubber tubing having a lumen of 1 millimeter and a thickness of wall of 1 millimeter, between the syringe and the needle. This tubing is provided at each end with a metallic couple, the syringe end being female and the needle end being male. The syringe should be all glass. The neosalvarsan is dissolved in sterilized distilled water, and is then drawn up into the syringe through a piece of sterile rubber tubing which contains in its lumen a bit of absorbent cotton which acts as a filter. The syringe and the special tubing described above are then held vertically and all air is expelled from the apparatus. A tourniquet is applied to the patient's arm above the elbow, and the skin in the region of the bend of the elbow is cleansed with alcohol. The needle is plunged into the median basilic vein and the blood is allowed to run freely until one is certain that the needle is in the vein. The tubing is then attached to the needle. It is not necessary to hold the latter for the constriction of the tissues that it has traversed suffices to keep it firmly in place. The solution is injected slowly. If any of it enters the subcutaneous tissue, this fact is at once made evident by an area of edema in the region of the puncture.—La Presse Medicale.

Hereditary Blue Sclerotics and Brittle Bones.

Cockayne reports the case of a female aged one year and ten months who had never walked and who had deep blue sclerotics. A skiagram showed an opacity of the bones less than normal. The infant's father had blue sclerotics and broke both legs at the age of 16. Recently he broke his femur and several ribs by falling from his bicycle. His sister had blue sclerotics and broke her ankle by slipping off the bottom step of a staircase. These two were smaller than any of their brothers or sisters. The grandfather was a very small man, had blue sclerotics and had frequently broken his bones.—Proceedings of the Royal Society of Medicine.

Thickening of the Palate and Upper Part of the Larynx, Probably Due to Congenital Syphilis.

Lambert Lack reports three cases that showed diffuse thickening of the uvula, pillars of the fauces, and adjacent parts of the soft palate, and of the epiglottis, arytenoids, and upper part of the larynx. The condition was chronic and did not yield to treatment by iodides, or mercury, or salvarsan. It was apparently stationary or varied very little, and showed no tendency to ulcerate. There was occasionally slight difficulty in breathing. The cases were similar to two others the author had previously shown, about which differences of opinion had arisen. In all but one the Wassermann reaction had been positive, and the diagnosis of congenital syphilis rested entirely upon this. In none of the cases had any treatment been beneficial, nor had microscopical sections of portions of tissue removed thrown any definite light upon the pathology.—Proceedings of the Royal Society of Medicine.

Infections of the Urinary Tract in Infancy and Childhood.

Marsh observes that pyelitis and cystitis are much more common in infancy and early childhood than is generally supposed. Therefore when a child is ill of fever, instead of following the usual custom of blaming teething or indigestion, the urine should be carefully examined for pus, especially in females, should therefore not be attributed to dentition or gastrointestinal indigestion until a careful examination of the urine for pus cells and organism has been made. The infection may result to direct infection with feces through the urethra, or from the direct passage of the organism from the bowels to the kidney. In spite of all treatment many cases become chronic.—Brit. Jour. Child. Dis.

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Unusual Manifestations of Poliomyelitis.—Batten (British Journal of Children's Diseases) mentions the following cases forming a series illustrating some of the more unusual manifestations of poliomyelitis, the word "poliomyelitis" being used in its broadest sense to indicate an acute fever which may affect any part of the nervous system:

(1) Athetosis of left arm and left side of face, flaccid paralysis of left leg, and

some flaccid paralysis of right leg.

(2) Poliomyelitis with rigid extension of the legs at the hips.

(3) Poliomyelitis with flaccid palsy of the right leg in the flexed position.

(4) Poliomyelitis of the right arm and left leg occurring during intrauterine life.

(5) Poliomyelitis and ataxia; probably due to cerebellar involvement.

(6) Poliomyelitis and toxic neuritis.

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Indigestion, a Forerunner of Diseases of the Cardiovascular and Renal Systems.

In the past few years all medical directors and insurance men have been very much interested in disease of the cardiovascular and renal systems and their terminal results, especially apoplexy, myocardial degeneration, coronary sclerosis, and uremia following chronic nephritis. In spite of the care in selecting risks our mortality from the above diseases seems to be increasing. Dr. Fred M. Hodges, Assistant Medical Director Atlantic Life Insurance Company, Richmond, Va., says that he has for the last three or four years been very much interested in a certain class of cases that may be overlooked at the time of examination, although a few years later many of the ordinary methods of examination would exclude them from insurance. During this time in a personal examination of 2,000 cases he has noted about thirty cases which would seem to him to come under this class. Cases having no symptoms or history of syphilis, alcoholism, or organic disease of stomach, appendix, or gall-bladder, etc., were selected. These persons seem to complain of slight indigestion, some discomfort after meals, and constipation before any cardiovascular or renal changes are noted. The cases may be divided into two groups. In group I are those giving a history of constipation, indigestion, etc., followed by cardiovascular and renal changes with elevated blood pressure. In Group II those with a history of constipation and indigestion followed by low blood pressure, marked indicanuria, and neurasthenic symptoms with very few or no cardiovascular or renal changes.

In order to show the development of cases in Group I this group has been divided into three stages, as follows: (1) Those where there was only a complaint of indigestion and constipation; (2) those where there was this complaint and where complete uranalysis and the sphygmomanometer would exclude them from standard insurance; (3) cases showing very little previous history except indigestion and constipation with well-marked cardi-

ovascular and renal changes. From his study of these cases Hodges draws the following conclusions: (1) Indigestion and constipation may in a small percentage of cases be the only impairment and forerunner of disease of the cardiovascular and renal systems, and this is of especial significance where there is family history of cardiovascular disease. (2) Home office uranalysis and the sphygmomanometer are usually the first methods of examination to exclude the cases later showing cardiovascular and renal changes. (3) Routine examinations for indican should be made in all cases of chronic constipation and indigestion and especially those showing low blood pressure readings. (4) Applicants about forty years of age and over, with heavy responsibilities and twenty per cent. or more over maximum weight, make up the majority of the cases of the first group. (5) Whatever may be determined to be the actual cause of indicanuria, from these cases it does not seem to be a prominent factor as a forerunner of cardiovascular and renal disease, but is found in a certain percentage of cases in association with low blood pressure. (6) This subject presents a very interesting and important field for further study, and we should direct our attention to scientific research in this direction.—Proceedings of the Fourth Mid-Year Meeting of the Medical Section of the American Life Convention.

Diphtheria Antitoxin in the Treatment of Pneumonia.

Elizagaray has essayed the application in pneumonia of this form of therapy, which a number of years ago was tried in other diseases, notably in meningitis. The theory upon which this treatment is based is that the antibodies contained in the diphtheria antitoxin may be effective against toxins other than those of the diphtheria bacillus. The author finds that in mild and moderately severe cases of pneumonia the diphtheria antitoxin hastens convalescence, but that it has no effect in diminishing the mortality in severe cases of this disease.—Revista Clinica de Madrid.

Fatal Acute Thyroid Enlargement.

The author examined the thyroid, thymus, kidneys, suprarenals, ovaries, and pituitary gland of a woman who had been naturally delivered of a normal male child. The following day severe bronchitis had been present, with marked dyspnea and inspiratory recession of the intercostal spaces. The neck measurement was given as 16 inches. The dyspnea and cyanosis had increased and death occurred the next day. An autopsy made twenty hours later showed acute bronchitis, but no laryngeal or tracheal stenosis. Thyroid showed regular enlargement and appeared to be solid except for one cyst cm. in diameter on its posterior aspect. There were no hemorrhages into its substance. The thymus formed a long tongue-shaped mass, measuring 11 by 2 by 1 cm. The ovaries were normal in size and appearance; corpora lutea were present. Adrenals: The left measured 6 by 4 by 1 cm. and weighed 9.3 Gm. It was enlarged by a central adenoma. The right was normal in size and appearance and weighed 5.5 Gm. The pituitary measured 15 by 8 by 6 mm. Numerous sections were cut from different portions of the glands. The appearance of the thyroid was suggestive of the rapid formation of new colloid alveoli. Nowhere was there intra-alveolar cell proliferation such as is seen in exophthalmic goiter. No increased fibrosis was demonstrable, and round-celled infiltration and other signs of acute inflammation were absent. The thymus was normal. Kidney: The glomeruli were normal. The cells of the tubules were swollen; no excess of fibrous tissue present. Ovary: No increased fibrosis. Adrenals: Sections showed little deviation from the normal. Pituitary: The anterior lobe contained big eosinophile (pregnancy) cells in large numbers, arranged in groups surrounding a central cavity, as a rule, and most frequently found in the anterior part of this lobe. The basophile cells were few. Large cells with protoplasm staining very feebly with any stain were frequently seen (exhausted secreting cells, or post-mortem change). The colloid was three or four times more abundant than normal. The pars nervosa had been invaded by the large eosinophile cells from the anterior lobe. White, in *The Journal of Obstetrics and Gynecology of the British Empire*.

Congenital Cardiac Lesions, Diagnosis and Prognosis of.

The author remarks on the great difficulty of making a diagnosis of the exact

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lesion in any individual case, and on the un certainty of the symptoms of any particular anomaly. He attempts to give guides from an analysis of 34 cases which he has personally observed. Functional murmurs due to anemia are decidedly rare under 4 years of age, but when present are invariably systolic in rhythm, loudest at the base, never conducted to the back, and usually disappear in the recumbent posture. A history of cyanosis, dyspnea, and palpitation during the early months of life is in favor of a congenital lesion, and this possibility is enhanced if there are other deformities present. Instead of cyanosis, an important sign of congenital heart disease, there may be extreme pallor, as was noted in 9 of the author's 34 cases. The cyanosis, too, may only appear later—the "forme tardive" of the French. Cyanosis, when evidence of acquired heart disease, is a late phenomenon, and is usually accompanied by edema and serous effusion, both of which are conspicuous by their absence in congenital heart affections. Murmur in congenital disease is, as a rule, loud, audible over a wide area, and at no

one place can it be said to be of maximum intensity, whereas in acquired mischief the opposite is the rule. It is usually systolic in rhythm, and may be diastolic as well, but never diastolic alone.

A systolic murmur as loud in the interscapular region, and especially on left side, as over the precordium points to a patent ductus arteriosus; in pulmonic stenosis the murmur may be well conducted behind, but it is never louder there than in front; in pure pulmonic stenosis the second pulmonic sound is almost or wholly inaudible, but where this lesion is complicated by a patent ductus arteriosus the second sound may be accentuated.

In 9 of the author's cases 34 cases a defect in the interventricular septum was diagnosed, and verified post mortem in 3 of them. In all a loud, rough, and practically continuous murmur was audible, with its seat of maximum intensity about the middle of the sternum and not conducted into the vessels of the neck. The cardiac sounds could be recognized distinctly, and the second pulmonic sound was of normal volume. In the cases (2 in number) in which this lesion was present alone, cyanosis was absent, whereas in 1 case, where pulmonic stenosis existed in addition, cyanosis was evident.

A patent foramen ovale does not allow of a definite diagnosis.

In pulmonic stenosis, met with with 15 times in the author's series, the symptoms usually consider characteristic—early cyanosis, systolic murmur, with seat of maximum intensity in the second left interspace, and weak or absent second pulmonic sound—are seldom found in practice, because this lesion is hardly ever present alone. When accompanied by a patent foramen ovale, persistence of the ductus Botalli, or by a defect in the interventricular septum, the second pulmonic sound is still present or even accentuated. With a persistent ductus arteriosus the murmur is rougher, conducted into the vessels of the neck, and the second pulmonic sound is accentuated; percussion may reveal in the second left interspace an area of dullness, which X-ray examination has demonstrated to be due to the dilated duct.

So far as aortic stenosis is concerned, those cases with narrowing of the isthmus are alone of clinical interest. In general, the symptoms of stenosis of the isthmus are identical with those of acquired aortic stenosis.

For the diagnosis of persistent ductus arteriosus the following combination of symptoms is of value: A rough systolic

murmur (when an aneurismal dilatation of the ductus develops a diastolic element appears), with its seat of maximum intensity at the sternal end of the second left interspace, and at times louder in the left carotid than in the right. Gerhardt has drawn attention to a small patch of dullness situated in the second left interspace, and capping the cardiac dullness.

So far as prognosis is concerned, it can only be said that when dyspepsia is marked the outlook is grave, and that when X-ray examination does not reveal any enlargement of the heart it is unlikely that the defect is of any severity. Abelmann, in Glasgow Medical Journal.

A Substitute for Carbon Dioxide Snow.

Sommer (Schweizerische Rundschau fur Medizin.) the use of acidum trichloraceticum as a substitute for carbon dioxide snow in dermatology. The latter has many disadvantages. It does not last long, and cannot, therefore, be despatched afar. The hire of cylinders is expensive, and their manipulation intricate. The author has found that trichloroacetic acid is in many respects more satisfactory. It forms colorless crystals which easily volatilize. Its melting point is 56 deg. C., and its boiling point is between 192 deg. and 195 deg. It is soluble in water, spirits of wine, and ether. It is kept in a brown, glass-stoppered bottle, and can be used in the form of crystals or a concentrated solution. It is so stabile when kept carefully corked in a dry place that it lasts for years.

The solution, which is more easily managed than the crystals, should be poured out into a watch-glass, care being taken not to contaminate the fingers. A drop is taken on a glass rod and placed on the skin, where it is lightly rubbed or pressed with the rod. This pressure is necessary to complete contact of the drug with the skin. The size and shape of the glass rod varies with the character of the area to be treated. When it is small, a small rod, with or without a bulbous end, should be used; when it is large, a thick rod with a bulbous or flat, shelving end should be used. The penetration of the drug being directly proportional to the pressure applied, this is increased when the disease is deep-seated.

To protect the skin in the neighborhood of the area to be treated a coating of colodion or mastisol should be applied. The latter is preferable, as it can be used as a dressing after the drug has been applied. This is allowed to dry, and though a dressing is subsequently not essential, it is useful. The area treated rapidly turns white, but it does not show the vesicles which may

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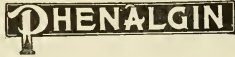
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lagra is some form of arsenic; and atoxyl
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follow the application of carbon dioxide snow. The discoloration of the skin is followed by the formation of crusts, which fall off in one to two weeks. The treatment should not be repeated before the reaction has completely passed off. Often one application is sufficient.

The conditions suitable for the treatment are new growths of the skin, warts, keloids, pigmentations, nevi, freckles, tattoo marks, etc. The advantages of the treatment are its cheapness and simplicity. Neither great technical skill nor an elaborate apparatus is required. The drug is always ready for use and is not easily decomposed. The strength of the reaction can be graduated by the strength of the solution and by the pressure applied. The drug does not, however, have such a penetrative action as carbon dioxide snow. The acid causes but little pain, but occasionally during or after its application a slight burning sensation is felt. The cosmetic results are good, and the author has seen no undesirable effects.—British Medical Journal.

Plasmodial Anemia.

In spite of the modern theory of the etiology of malaria and malarial affections (mosquito-borne infection) this plasmodial disease continues to be rife in certain sections of the country and bids fair to be, like "the poor," "always with us."

Every physician of experience appreciates the principles which should guide him in the treatment of the various acute manifestations of paludal poisoning, i. e., the destruction of the plasmodial hosts which have invaded the blood and which, if not eliminated, consume and destroy the red cells, the vital element of the circulating fluid.

When this purpose has once been accomplished the patient is but partly cured; the damage done to the red corpuscles must be repaired and the vitality of the blood restored, if re-infection is to be avoided. If there is any one condition in which direct hematonic or blood-building therapy is positively indicated, it is in Post-Malarial Nemia. As soon as the febrile period has passed, iron, in some form, should be given in full dosage. Pepto-Mangan (Gude) constitutes the ideal method of administering this essential blood-building agent in this as well as in any anemic condition. Both the iron and manganese in Pepto-Mangan are in organic combination with peptones and are therefore easily and promptly absorbed and assimilated without causing digestive derangement or producing constipation.

Why Clothes Should Be Boiled.

In the October Woman's Home Companion appears a most practical article entitled "The Washing of Clothes." The author gives a complete description of what she considers the best methods in the whole process of clothes-washing. Following is what she has to say about boiling clothes:

"Some housekeepers believe in boiling the clothes before rubbing, and some do not believe in boiling them at all. Others believe that clothes are made yellow by boiling. Boiling does not make clothes yellow. Clothes become yellow when they are improperly rinsed, when there is iron in the water or a deposit of iron is formed from the boiler, or by the use of an impure soap. On the other hand, boiling takes an important part in the dissolution and removal of the soap which expert housekeepers, who know that the soap must be removed if the clothes are to keep their color and wearing qualities, will recognize as an indisputable reason why the clothes should be boiled—and boiled after rubbing. In these days of sterilizing, it seems illogical to accept as clean, unboiled clothes."

Two hundred and fifty Brooklyn physicians have formed a company for preparing and dispensing their drugs. The plan seems good, the doctor has no time to mix drugs. He dare not entrust his professional reputation to the men who assume toward him the attitude of rancorous hostility depicted in Mr. Englehard's journal and addresses. Quality of drugs is so all-important to the doctor that he dare not delegate the matter to an enemy.—The Medical World.

Chronic Bronchial and Pulmonary Affections.

There is a considerable number of chronic bronchial and pulmonary disorders in which the administration of iodine in some form would prove serviceable. Thus in chronic bronchitis and pleurisy, in conjunction with the syrup of iodide of iron the iodide of potash will prove of benefit. An excellent means of exhibiting the iodides in such cases is offered by Iodia (Battle). This preparation will also prove of advantage in other pulmonary or bronchial disorders in which an indication for iodine may exist. A point of superiority in Iodia (Battle) is its palatability and the ease with which it is tolerated over long periods.

The man who lets a sick kidney be poisoned by toxins from a constipated colon is—not quite a doctor.—Medical Summary.

Cod Liver Oil as a Nutrient.

In passing judgment on cod liver oil, it should be remembered that it is a food agent, and not a drug. If this is done, the value of this nutriment will be much better appreciated. Since cod liver oil is an agent that must be given over long periods of time, it is very essential that a palatable product be chosen, otherwise the gastric apparatus will be disturbed. Cord. Ext. Ol. Morrhuae Comp. (Hagee) is a very valuable preparation of cod liver oil and is in wide use among the medical profession. Containing, as it does, all the active principles of the oil, its effectiveness is in no wise diminished by reason of the process it has gone through, on the contrary its very palatability has added to its therapeutic value by making it possible to give it under the most trying circumstances, and contributing to its ease of assimilation. Cord. Ext. Ol. Morrhuae Comp. (Hagee) will be found of high worth in states of under nourishment.

Of all those who see yellow and blue, none compares with the man who is studying sexual abnormalities. He is mentally jaundiced. Everybody is abnormal; every action has an evil significance.—The Medical World.

The Tuberculosis Invalid.

The pricking of the Friedmann bubble but served to still further confirm and accentuate the vital importance of the well-defined methods of treatment for tuberculosis, that have given such encouraging results, i. e., fresh air, sunshine, rest, nutritive reinforcement and judicious medication. A proper combination of these four remedial factors is practically certain to place the incipient tuberculous invalid upon the road to recovery, if the patient is intelligently handled and the treatment persisted in. While it is, of course, acknowledged that the first three non-medical agents referred to constitute the vital elements of the upbuilding regime, considerable aid is afforded by judicious medication. Hematinic reinforcement should certainly not be neglected, in view of the secondary anemia which is almost always apparent. Among the agents which have produced the best results in the revitalization of the blood, Pepto-Mangan (Gude) is the most generally eligible and acceptable. As it is thoroughly palatable, neutral in reaction, free from irritant properties and devoid of constipating effect, the digestion of the patient is not disturbed, while the appetite and general vital tone improve more rapidly and



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satisfactorily than when hygienic and nutritive measures are depended upon exclusively.

In acute nephritis don't use any form of digitalis, or apocynum, or any vasoconstrictor of any description.—Medical Summary.

Courage—and Hysteria.

The month just passed has seen a revolution in the affairs of the British nation such as has seldom fallen to the lot of man. The change from smiling peace into grim-visaged war has been sudden and unexpected, and to the credit of the nation be it said that the people have behaved splendidly. "Mafficking" has been almost entirely absent: the situation has been too serious for music hall patriotism. Our very hearths and homes are threatened, and it will not save them to wave flags and sing "Rule Britannia." The tendency to panic, visible during the first few days, soon subsided, and the position has been faced seriously and sensibly.

On all sides one hears the question, "What can I do?" and few seem to realise that the greatest and noblest work for the majority of citizens lies at their own doors. The work of the country—professional and commercial—must be carried on; money must circulate; unemployment must be reduced to a minimum. Many of our citizens have been called away on active service, and their work must be done during their absence; it therefore behooves those who are left behind to see that the needs of the people are supplied.

Of course much can be done in one spare time in the direction of assisting those in whose hands our destinies are placed. Such assistance is fully explained in the daily papers. We would specially mention the Prince of Wales's National Relief Fund, to which every one should contribute something, either directly or through some collecting body, while contributions in kind to the arm and Red Cross service are always welcome. And—hardest task of all—we must possess our souls in patience, and discourage in every possible way the dissemination of unauthenticated news, good or bad. Our duty lies in the exercise of calmness, level-headedness, and general common sense. Only in this way can we display that true courage which is the antithesis of hysteria.—The Prescriber, Edinburgh.

Early Operation of Exophthalmic Goiter.

The author operated on 28 cases of exophthalmic goiter, in all but 6 of which

the disease was severe. He insists on the necessity of educating general practitioners to realize the importance of an early operation in every case of exophthalmic goiter, as soon as the diagnosis is made. This puts an end to the excessive thyroid functioning before the resulting products have irreparably damaged the heart, kidneys, liver, lymphatic system, etc. The thyroid tissue is firmer and more easily operated on at this early stage, and the heart is in better condition. The results are prompt and permanent; especially noticeable is the rapid and complete subsidence of the exophthalmos. The author had 2 fatalities, both in long-standing cases. The patients were greatly frightened and both died before the operation proper was begun. He now refuses to operate when the patient is in such fright. Those with vagotomy seem to be in a more precarious condition than others, a *salso* those at the height of intoxication—evident in the excitement and muscular weakness, while the more rapid pulse after slight exertion and a trace of dyspnea are signs of beginning exhaustion on the part of the heart. Under normal condition there is a difference of from 0.1 deg. to 0.3 deg. C. between the temperature in the axilla and rectum; when there is a difference of a whole degree chronic weakness of the heart is suggested. At the same time, extreme excitability seems to have a greater influence on the outcome than the state of the heart.—Liek, in Archiv Fur Klinische Chirurgie.

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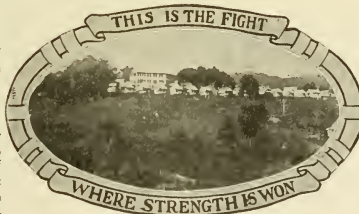
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In acute nephritis the problem is to keep down toxemia until the hypermia subsides and the kidneys resume their depurative activity.—Medical Summary.

Empyema of the Antrum With Infection of the Nose and Cheeks.

Davis reports the case of a woman, aged 30, who had redness, infiltration, and edema of the nose and both cheeks of six months' duration. The author mistook the case for one of lupus erythematosus. There were shadows on transillumination, but this might have been accounted for by the extreme thickness of the infiltrated integuments. Pernet who saw the case, disagreed with the author's diagnosis, and suggested an empyema of the antrum and a septic infection of the integuments therefrom. This on intranasal puncture proved to be the case. The condition is one of chronic symmetrical lymphangitis with blocking of the lymphatics from a septic focus in the antrum.—Proceedings of the Royal Society of Medicine.

"Paraldehyd" possesses many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd (see page xiv this issue) which is an elegant preparation.

In re-Pil. Cascara Comp. Robbins, Mild and Strong, see page x they contain no strychnia to poison, no Belladonna to dry the secretions or abnormally dilate the pupils—nothing to injure your patients. They are suited to all conditions requiring more or less alimentary stimulation. Given per se or with any other remedial agent. As anti-dyspeptic, aperient, laxative or cathartic they are always pleasant and thorough, and do not leave the alimentary tract in a state of atony. No unpleasant symptoms develop from continued use.

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the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed, No "just as good" allowed.

Pharmacology of Digitalis.

Gottlieb (Archives des maladies du cœur, des vaisseaux, et du sang, January, 1914) recently communicated to the XVII Congress International des Sciences medicales a paper on recent advances in treatment by digitalis and its derivatives. He insists on the inapplicability of results obtained by experiments on normal animals to morbid states. He instances camphor as an example. In health this drug has little or no effect upon the circulation or upon the heart. In vasomotor paralyses, on the contrary, the irritability of the vasomotor center is markedly augmented, and the heart, which has almost ceased to beat from any cause, starts off again after a dose of camphor. The present task of pharmacology in relation to digitalis is to experiment in diseased conditions with minimal doses, which scarcely affect the normal circulation. The slowing of the heart beat, so much insisted upon by Cushny and his collaborators, occurs only in that form of arrhythmia connected with auricular fibrillation. It is not in this way that the classical effect of digitalis in conditions of venous stasis, where there is neither arrhythmia nor abnormal rapidity of the pulse, can be explained.

The author divides the digitalis group of substances into two classes—those which are easily absorbed by the heart muscles and as easily disengaged, and those which are more slowly absorbed and act over a longer period. In the former class is strophanthin; in the latter digitoxin; others are intermediate. It has been shown that there are differences in the effort of the gastric and intestinal contents under different circumstances. Strophanthin is easily altered in the stomach and intestines. Digitoxin is much more stable, but is absorbed with difficulty. Ogawa has shown that digipuratum is fairly well absorbed, except where there is postal stasis, when absorption may be almost nil. The drawbacks incidental to the administration of digitalis by the mouth are avoided by giving strophanthin or digipuratum intravenously. In therapeutic doses intravenously neither nausea nor vomiting occur. For this and other reasons

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it would seem that gastric disturbance apt to be caused by digitalis is due to a local irritating action on the mucous membrane and not to an excitation of the center of vomiting.

Digipuratum is recommended as the best form in which to give digitalis by the mouth. It is soluble in slightly alkaline media, is thus easily absorbed in the intestine, but passes through the stomach; it is fairly stable. The pure glucosides isolated from digitalis do not seem to have all the therapeutic properties of the leaves. Digipuratum is a mixture of the totality of the active principles, but in view of the inconstancy and variability of these, and our want of definite knowledge regarding them, it is best that the dose for each case should be ascertained by careful trial. The physiological method of standardizing digitalis preparations is to be preferred, but presents practical difficulties. By injecting different quantities of a preparation, the quality of which is known, into the lymphatic sac of the frog (after the method of Houghton) its strength can be estimated, but the quality of different specimens of digitalis leaves or preparations varies so much that experiments on warm-blooded animals are also required, in order to obtain a complete estimation of the value of any particular specimen.—British Medical Journal.

Congenital Cardiac Lesions, Diagnosis and Prognosis of.

The author remarks on the great difficulty of making a diagnosis of the exact lesion in any individual case, and on the

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uncertainty of the symptoms of any particular anomaly. He attempts to give guides from an analysis of 34 cases which he has personally observed. Functional murmurs due to anemia are decidedly rare under 4 years of age, but when present are invariably systolic in rhythm, loudest at the base, never conducted to the back, and usually disappear in the recumbent posture. A history of cyanosis, dyspnea, and palpitation during the early months of life is in favor of a congenital lesion, and this possibility is enhanced if there are other deformities present. Instead of cyanosis, an important sign of congenital heart disease, there may be extreme pallor, as was noted in 9 of the author's 34 cases. The cyanosis, too, may only appear later—the “*forme tardive*” of the French. Cyanosis, when evidence of acquired heart disease, is a late phenomenon, and is usually accompanied by edema and serous effusion, both of which are conspicuous by their absence in congenital heart affections. Murmur in congenital disease is, as a rule, loud, audible over a wide area, and at no one place can be said to be of maximum intensity, whereas in acquired mischief the opposite is the rule. It is usually systolic in rhythm, and may be diastolic as well, but never diastolic alone.

Systolic murmur as loud in the interscapular region, and especially on left side, as over the precordium points to a patent ductus arteriosus; in pulmonic stenosis the murmur may be well conducted behind, but it is never louder there than in front; in pure pulmonic stenosis the second pulmonic sound is almost or wholly inaudible, but where this lesion is complicated by a patent ductus arteriosus the second sound may be accentuated.

In 9 of the author's 34 cases a defect in the interventricular septum was diagnosed, and verified post mortem in 3 of them. In all a loud, rough, and practically continuous murmur was audible, with its seat of maximum intensity about the middle of the sternum and not conducted into the vessels of the neck. The cardiac sounds could be recognized distinctly, and the second pulmonic sound was of normal volume. In the cases (2 in number) in which this lesion was present alone, cyanosis was absent, whereas in 1 case, where pulmonic stenosis existed in addition, cyanosis was evident.

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systolic murmur, with seat of maximum intensity in the second left interspace, and weak or absent second pulmonic sound—are seldom found in practice, because this lesion is hardly ever present alone. When accompanied by a patent foramen ovale, persistence of the ductus Botalli, or by a defect in the interventricular septum, the second pulmonic sound is still present or even accentuated. With a persistence ductus arteriosus the murmur is rougher, conducted into the vessels of the neck, and the second pulmonic sound is accentuated; percussion may reveal in the second left interspace an area of dullness, which X-ray examination has demonstrated to be due to the dilated duct.

So far as aortic stenosis is concerned, those cases with narrowing of the isthmus are alone of clinical interest. In general, the symptoms of stenosis of the isthmus are identical with those of acquired aortic stenosis.

For the diagnosis of persistent ductus arteriosus the following combination of symptoms is of value: A rough systolic murmur (when an aneurismal dilatation of the ductus develops a diastolic element appears), with its seat of maximum intensity at the sternal end of the second left interspace, and at times louder in the left carotid than in the right. Gerhardts has drawn attention to a small patch of dullness situated in the second left interspace, and capping the cardiac dullness.

So far as prognosis is concerned, it can only be said that when dyspepsia is marked the outlook is grave, and that when X-ray examination does not reveal any enlargement of the heart it is unlikely that the defect is of any severity. Abelman in Glasgow Medical Journal.

Lymphosarcoma, Coley's Fluid in.

The author reports the case of a man who had had a soft, rounded, fairly movable tumor beneath the left sternomastoid removed by operation, and in whom recurrence took place rapidly, the pathologic report showing that the growth was a lymphosarcoma. After partial removal recurrence again took place. Injection of Coley's fluid was begun, the initial dose being 1-2 minim (0.03 c. c.). This amount was gradually increased for three weeks, an injection being given each day. In three weeks the amount given daily was 10 minims (0.6 c. c.), and this was continued for two more weeks. A well-marked reaction with inflammation followed each injection. Except for the first few days, all injections were made into the tumor itself. The latter stopped grow-

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ing in a week, and then began to diminish in size, through this was masked to some extent by the local inflammation and thickening set up by the injections. After the injections were stopped the swelling subsided, and in a few days nothing could be felt of the tumor. A further course of injections was given for a month, 10 minims being administered on alternate days, and the patient was kept under observation for two months. A year later there was no sign of recurrence and the patient appeared to be in perfect health. Spencer, *Journal of the Royal Army Medical Corps.*

The chief objection to the salicylates in the treatment of rheumatic disorders is that when given in sufficiently large doses to be effective they often produce decided gastric irritation and impairment of the digestive function. Clinical experience has proven conclusively that strontium salicylate is the best tolerated by the stomach of any of the salicylates. Rheumalgine, Lilly, presents strontium salicylate made from the natural oil, therefore, the salt is not only better tolerated but more efficient than the synthetic salicylate. In addition, Rheumalgine contains hexamethylenetetramine and colchicine, drugs whose therapeutic effects in rheumatic disorders are well known. The combined action has many advantages especially in cases of auto-intoxication from faulty elimination and also in those having a uric acid diathesis. Rheumalgine is supplied in liquid and tablet form through the drug trade.

The Laboratory and the Clinic.

There are few more significant principles contributing to form the substratum of good and successful work at the bedside than a just estimate of the correct relationship between clinical and experimental work, and lack of the requisite clearness of mental vision in this matter is, I believe, one of the most potent causes of unexplained disappointment and failure. We sometimes observe a man of high intellectual power, honest, painstaking and industrious, who seems to fail unaccountably, and by that I do not mean in respect of wordly advancement and public estimation, but he fails in the actual practice of his profession at the bedside. If I were asked to state in general terms what in my opinion is the most frequent defect that underlies this regrettable phenomenon, I should reply without hesitation, "Inability to distinguish clearly between the teachings

of the laboratory and those of the bedside" Russell, *British Medical Journal.*

Injury of the Deep Branch of the Ulnar Nerve.

Woodward reports the case of a boy aged 15 years who fell on a spike and wounded his left wrist and palm. The wound was infected and healing occupied some weeks. There was paralysis of the interossei, ulnar lumbricales, and adductors of the thumb. Owing to the absence of sensory changes this lesion was prone to be overlooked at the time of the injury. *Proceedings of the Royal Society of Medicine.*

Tetanus Treated With Subcutaneous Injections of Phenol.

Report of a case of tetanus in a boy aged 11 in which the original wound and scar were excised and pure phenol applied. At the same time subcutaneous injection of phenol (Bacelli's treatment) was started, 1 fluidounce of a 1 per cent. solution being given in the right axilla. The strength of the phenol solution was raised to 3 per cent. The groins and axilla were treated alternately. Chloroform was administered at each injection owing to the spasms produced by the needle-prick. The urine retained its normal color throughout. On the sixth day cutaneous erythema and slight edema were noticed at the sites of injections, and these were discontinued; but the spasms increased in violence and frequency, and the phenol solution was again given on the seventh day. On the thirteenth day of the opisthotonos became very marked. By the twentieth day it had become excessive, although the spasms decreased both in violence and frequency. On the same day the opisthotonos suddenly began to diminish, and had entirely disappeared by the twenty-third day. The patient was able to open the mouth slightly about the sixteenth day. Improvement continued uneventfully during the next four weeks, and he was discharged cured on the fifty-sixth day. No antitetanic serum was administered.—Keynolds, in *The London Lancet.*

A Phylacogen for Typhoid Fever.

An announcement that will undoubtedly occasion widespread interest among physicians is appearing in current medical journals over the signature of Parke, Davis & Co. We refer to the announcement of Typhoid Phylacogen. The new product is prepared from pure cultures of the bacillus typhosus of Eberth and Mixed Infection Phylacogen. As the name signifies, this latest Phylacogen is indicated

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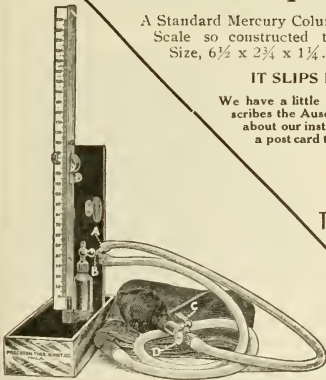
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Parke, Davis & Co. have issued a 32-page brochure on Typhoid Phylacogen which deals in extenso with the new method of treatment, discusses diagnosis, dosage, technique of administration, etc., and reproduces a valuable paper by Dr. E. P. Benoit, professor of clinical medicine in

the Laval University and physician at Notre Dame Hospital, Montreal, read before the Medical Society of Montreal and later published in "L'Union Medicale du Canada." Dr. Benoit refers at some length to a number of typhoid cases that were treated at the Notre Dame Hospital, concluding his paper with the significant observation that "the treatment of typhoid fever with Phylacogen gives real results." Physicians are advised to send for a copy of this "Typhoid Phylacogen" pamphlet, addressing their requests to Parke, Davis & Co. at their home offices in Detroit, Michigan.

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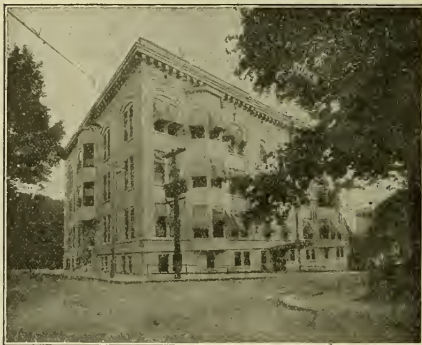
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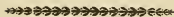
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Henry Enos Tuley, M. D., Sec'y.,
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D'Orsay Hecht, M. D. Pres. Chicago, Ill.

SOUTHERN SURGICAL and GYNECOLOGICAL ASSOCIATION.

Annual Meeting at Asheville, N.C.
Dec. 15-17, 1914-

W. D. Haggard, M.D., Sec.,
Nashville, Tenn.

John W. Long, M.D., Pres.
Greensboro, N. C.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Richmond, Va.
Nov. 9-12, 1914.

Seale Harris, M.D., Sec.,
Mobile, Ala.

Stuart McGuire, M.D., Pres.
Richmond, Va.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting Feb. 1915.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Edw'd C. Register, M.D., Pres.
Charlotte, N. C.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Birmingham, Ala.;
April 20, 1915.

N. Baker, M.D., Sec.,
Montgomery, Ala.

B. B. Sims, M.D., Pres.,
Talladega, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting at Galveston, Tex.,
November, 1914r

F. H. Clark, M.D., Sec.,
El Reno, Okla.

S. S. Glasscock, M.D.,
Kansas, City, Mo.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Deland, Florida,
May, 14, 1915.

Wm. C. Little, M.D., Sec.,
Jacksonville, Fla.

F. Clifton Moore, M.D., Pres.
Tallahassee, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Macon, Ga.
April, 21-23, 1915.

Wm. C. Lyle, M. D., Sec.
Augusta, Ga.

W. B. Hardman, M.D., Pres.,
Commerce, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Newport, Ky.,
Sept. 23-25 1915.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

W. O. Roberts, M. D., Pres.
Louisville, Ky.

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at Lake Charles, La.
April. 20-22, 1915.

R. DeBuys, M.D., Sec.,

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Geo. S. Bel, M.D., Pres.
New Orleans, La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Hattiesburg, Miss.
May, 11, 1915.

E. F. Howard, M.D., Sec.,
Vicksburg, Miss.

J. S. Ullman, M.D., Pres.
Natchez, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Greensboro, N. C.
June, 16, 1914.

L. B. McBrayer, M.D., Pres.,
Sanatorium, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
Oct. 5-7, 1914.

Dr. R. E. McBride, M. D. Las Cruces N.M.
Secretary.

H. B. Kauffman, Pres. Albuquerque, N.M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Greenwood, S. C.
April, 20-22, 1915.

Edgar A. Hines, M.D., Sec.,
Seneca, S. C.

E. F. Parker, M.D., Pres ,
Charleston, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Nashville, Tenn.
April, 1915.

Olin West, M.D., Sec.,
Nashville, Tenn.

S. M. Miller, M.D., Pres.
Knoxville, Tenn.

MEDICAL SOCIETY OF VIRGINIA

Annual Meeting at Washington, D. C.
Oct, 27-30 1914.

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Charlotte Medical Journal.

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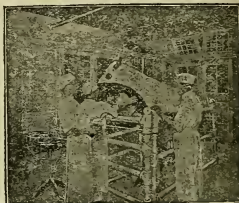
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*Rufus Cole, M.D., New York, 1913. Jour. A. M. A., lxi, No. 9, p. 663.

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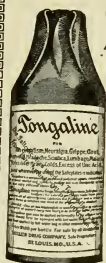
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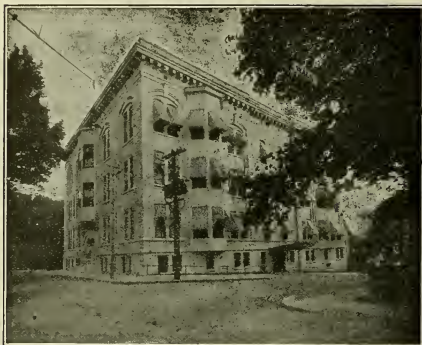
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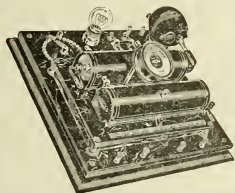
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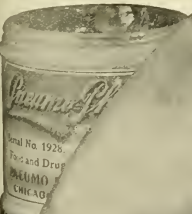
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GEO. W. LONG, M.D., GRAHAM, N. C.

The Charlotte Medical Journal

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Dr. Geo. Washington Long.

Edited by Drs. D. W. and Ernest S. Bulluck,
Wilmington, N. C.

The portrait on the opposite page of the magazine this month is that of Geo. Washington Long, one of the prominent physicians of Graham, N. C., where he has been a most faithful practitioner for forty years.

Dr. Long was born July 15, 1848, near Graham, N. C. He is the son of Jacob and Jane Stuart (Stockard) Long and his boyhood days were very happily spent upon his father's farm.

His early school days were spent at Graham High School, and Dr. Alex Wilson's Academy. In 1865, though a lad of only 16, he was one of the hundred cadets who volunteered at the call of Governor Vance to repel the invasion of Western North Carolina by the forces of the enemy and to do other military service at Raleigh and Goldsboro.

His first intention was to become a lawyer and a start was made in this direction but his marriage at nineteen to Miss Mary Catherine Walker, the only daughter of Dr. John Adams Walker, caused him to change his plans and make the study of medicine his life work. He began to read medicine under his father-in-law, and in 1874 he was graduated from the University of Pennsylvania and was licensed by the State Board on May, 1877. During his long years of practice Dr. Long has done general work, but none the less thorough. From time to time he has attended Hopkins Hospital, at which times he did not matriculate but through the courtesy of the superintendent of the hospital he was permitted to attend any or all the clinics. His activity in his profession extended beyond the scope of his own practice into the Medical Association of his State. His sterling character and superior ability led to his holding the following trustworthy offices:

President of North Carolina Medical Society.

Alamance Medical Society.

District Medical Society.

Member of State Board for six years—four on practice and two on chemistry.

He is now Superintendent of Health of Alamance County, which office he has held for many years.

Dr. Long is a member of the Presbyterian Church and his religious life has been characterized by the same deep interest and activity as characterizes his efforts in his life work. He is now Ruling Elder in the Presbyterian Church. He has been Commissioner twice to the General Assembly and delegate to the Synod and Presbytery.

Dr. Long is a member of the Knights of Pythias and he has proved his general usefulness in his lodge work as he has in all other respects. He has held most of the chairs and was once elected representative at the State Grand Lodge.

The life of Geo. W. Long truly exemplifies a sure foundation wrought by the careful training of godly parents, enhanced in young manhood by hard work and faithful service in this profession and beautified at the age of sixty-six by a deep love and sympathy for humanity.

Waldeyer's Ring and its Relation to General Disease.

By William T. Patton, M. D., New Orleans, La.
Professor of Otology and Laryngology in
La Post Graduate Medical School, Senior
Otolologist and Laryngol Charity
Hospital, Senior Otolologist and
Laryngol Presbyterian
Hospital.

In writing this paper it is not my purpose to bring out anything new or original, but to find a subject which is of interest both to the specialist and general practitioner; and to refresh your mind as to the importance of Waldeyer's Ring in relation to disease in other parts of the body.

First, it will be necessary to consider the anatomy of the tonsils briefly. The tonsils are composed of lymphatic calls, collected in groups called follicles. These follicles are separated from one another by areas of connective tissue, and these masses so formed are held together externally by a fibrous capsule, which binds the tonsils to tonsillar sinus, the triangular space between anterior and posterior pillars of soft palate. The internal surface of the tonsil facing oral cavity is covered by a flat epithelium. The epithelium of the mouth and nasopharynx is generally ciliated and directs particularly toward the tonsils. The surface of the tonsil is irregular and in-

dented with crypts, ten to twenty in number, which have opening into them the ducts of the muciparous glands, situated in the stroma of the tonsils. Surrounding each follicle is a close plexus of lymphatic vessel, which enter submaxillary lymph gland and the cervical glands. Main blood supply-tonsillar artery, branch of facial, also branches from lingual, internal maxillary and ascending pharyngeal. Nerve supply, branch from trifacial and glossopharyngeal. The tonsil is fully active and developed at end of first year of life and it functions at all in special way it does so be fore age of seven, and after that has tendency to atrophy.

The adenoid and lingual tonsil is made up about the same way as the faucial tonsil. The adenoid is placed in the post-nasal space with the orifice for the eustachian tube in close proximity. Lingual is found at base of tongue. Thus we have in the tonsils a lymphatic structure with a short period of usefulness. In studying the physiology of these glands many hypothesis have been advanced concerning its functions, only a few of which I shall mention:

1. Tonsils are residual lymphatic remains.

2. Tonsils have some relation to organs of generation, and their removal may cause sterility; this has been proven false.

3. Tonsil a blood-forming organ in early life.

4. Wood considers organ holding a digestive ferment.

6. Having internal secretion resembling adrenals and thymus.

7. Others claim it has a protective character for body.

8. Schoeneman considers the tonsil a lymph gland like the rest of body, having for its main function the drainage of the nasal mucous membrane.

9. Tonsils secrete mucous filled with leucocytes and have protective character against bacteria, and have been well named "the sentinels of the body." Tonsil is often spoken of as portal of entry of disease. This may be true in diseased glands, but rarely in healthy state. The functions of adenoid and lingual tonsils are so closely allied to faucial tonsils that they may be considered the same. The adenoid being first to function and first to atrophy, then faucial tonsil, and, last, lingual tonsils. Whatever the functions of these glands may be, there need be no fear in removing if diseased, for it is seldom necessary to remove entire ring,

and even if we do there is always sufficient amount of the lymphoid tissue left behind to take up function. All of these little glands are perfect culture tubes, and are habitat of numbers of germs at all times, and whenever there is a lower resistance, they are ready to attack; when glands are diseased and not functioning they are easy portals of entry.

Having the anatomy of tonsils, their infinite lymphatic and arterial connections, it becomes easy to understand how they cause other trouble than local conditions. Let us take a diseased tonsil. On removal we will find gland soft and full of cheesy putrid material, and loaded with bacteria, some of this being constantly absorbed into the system.

The writer thinks can safely place so-called rheumatic conditions, first, among affections closely associated with tonsil trouble, and has seen cases of polyarthritis of long standing greatly improved by removal of diseased buried tonsil. I will state here that is often impossible to say on examination of a tonsil that it is diseased. Have removed tonsils at request of internist, which to all appearance seemed normal, and often found deeply located in gland small collections of pus. Others could find nothing microscopically, but was gratified to see arthritis clear up; therefore, it is the author's opinion that in any case of rheumatism of any duration where no other foci of infection, such as sinuses, prostate, appendix, gaul bladder, etc., can be found, the tonsil should certainly be removed.

Closely following rheumatism, we have endocarditis; in fact, tonsilitis, rheumatism and endocarditis are so closely connected that when finding one we always look for the other.

Dr. Babcock, in a recent paper before the Mississippi Valley Medical Association, said: In many cases of endocarditis or rheumatism in a child, if it recovers the tonsils should be removed if in slightest way diseased. Other common disturbances due to bad tonsils are the various gastric trouble. The writer recalls one case of a young woman suffering from frequent attacks of digestive troubles, which was entirely cured by removal of small submerged tonsils. There have been cases of acute nephritis from absorption of toxins from tonsils. Asthma is sometimes due to reflex irritation of buried tonsils.

We are all familiar with cutting pain in throat or running into ear from tonsils. Tonsils, by pushing up into naso-

pharynx, together with adenoids, are frequent cause of otitis media.

It is hardly necessary to mention obstruction to breathing and all its deleterious effects. The lingual tonsil seems to cause less trouble than the rest of ring, but often we have a patient complaining of cough and can find no cause in lungs; removal of linguals will often give relief. Also numerous comorous complaints of a foreign body at the base of tongue or in larynx, due to enlarged linguals touching epiglottis.

I have seen several cases of chronic laryngitis greatly improved by removal of lingual tonsils, patient explaining after operation that throat feels much clearer, and voice does not tire so easily.

I do not care to give the impression that I consider members of Waldeyer's Ring "the root of all evil," yet it is so often at the bottom of the trouble that I think I may caution the general practitioner to more carefully examine the pharynx and naso-pharynx, and because he does not see a large tonsil or inflamed area, not to decide too hastily that the tonsil is not at fault, for it is often the little buried tonsil that gives the most trouble.

1109 Maison Blanchse Bldg.

An Up-To-Date Abattoir, A Sanitary Asset,

By R. L. Robertson, M. D., Health Officer,
Charlottesville, Va.

A short visit to the slaughter house of the average butcher in any of our smaller towns is all that is required to convince anyone of the need for improvement in this line of health work. The only reasons that are given for maintaining such nuisances, are that they have been used heretofore, that the people have gotten along pretty well and that it cost too much to change. No town or city that deserves the name of progressive should tolerate such reasons.

In the majority of cases all that is needed to have an up-to-date abattoir is to have a good conservative physician, or better still, the health officer agitate the question and educate the public up to a demand for more sanitary conditions in regard the meat supply.

The private slaughter house, as a rule, is a most uninviting place, swarming with flies, bad smelling, unclean from refuse and blood, with a poor water supply and no sewerage. The animal is slaughtered and cannot be properly cleansed or protected from flies; is several hours in reaching a refrigerator, thus holding a

certain amount of animal heat and undergoing undesirable changes for hours before it is properly cared for.

An examination of meat that has been treated properly in an abattoir, and a specimen killed at the same time in a private slaughter house, after twenty-four hours, will show so marked a difference that the most careless observer will be convinced that the slaughter house is a sanitary crime.

Another point to be considered is the nuisance to the neighborhood around the private slaughter house, if there is a stream near by as is generally the case, it is polluted by the blood and filth; hogs are nearly always kept to consume the refuse which is only partially done, so the combined nuisances make the spot loathsome to the senses of sight and smell and dangerous to health, being a breeding place for flies and dangerous germs, while its odor is disagreeable for a mile around, as every breeze that blows over the site is tainted by its stench.

The thought that our meat supply is coming from such a source is repugnant in the extreme. It behooves every town to examine into this matter and see whether my picture is not truly drawn in the main and that it is high time to demand a change.

The practical working of the abattoir in our city has been a source of the greatest satisfaction to all concerned, the butchers as well as the public. In the first place all the work of butchering and caring for the meat supply is concentrated in one place where inspection work is rendered thorough and easy. The plant is sanitary to almost perfection. Water is abundant and pure, sewerage perfect, no flies, no filth, no bad odors. As soon as an animal is butchered and cleansed it is run into a chilling room and all animal heat is extracted before changes can take place, from there it goes into the cold storage to await the butchers call for his refrigerator.

Thus meat reaches the consumer in the most sanitary condition possible. The danger of diseased animals being used for consumption is eliminated, the moment there is suspicion of disease in the carcass of an animal the authorities of the abattoir notify the health officer and immediately an inspection and condemnation of the meat if necessary is made. The abattoir is kept beautifully clean and free from bad odors, having been constructed with a view to perfect ventilation and easy washing of walls and floors by use of the hose. All refuse which was entire waste under the old system, is convert-

ed into fertilizer, and, instead of creating a nuisance, becomes an asset with a market value for which the butcher is paid. The owners of several of our leading meat markets have said that they would go out of business before they would go back to the old system of slaughtering.

In all cases of trouble in regard to condemnation of diseased cattle, or where help is wanted in any way the Food and Dairy Commissioner of the State is always ready to assume responsibility and straighten out difficulties, generally to the perfect satisfaction to all concerned, thereby relieving the local health officer and the abattoir officials of a very disagreeable task.

Tainted and diseased meat is sometimes a prolific source of disease, and much more sickness would be caused by it, if it were not for the fact that cooking in a great degree lessens the danger; the mere thought of using such meat for food is repugnant and nauseating.

These remarks are made in a spirit of co-operation with my fellow health officers and brother physicians, and are intended to arouse interest in this subject which I have found from experience to be a most excellent sanitary asset.

Two Astrologers of the Nineteenth Century.

By William H. Taylor, M. D., Emeritus Professor of Chemistry, Medical College of Virginia, Richmond, Va.

Most doctors take an interest in what is called the occult. Medicine has, in fact, always been associated with mystical matters, and in the earlier days particularly was almost indissolubly connected with magic, necromancy, alchemy and astrology. Some of the tincture of these is still upon it. As for me, I have all my life been fond of inquiring into these vagaries of the human mind and of late I have been much interested in noting the mystical outgrowths from the present stupendous European conflict. I must confess that I have been greatly disappointed at the failure of any comet, the well established harbinger of war, to come blazing into the sky, and even more disconcerted by the fact that the August eclipse of the sun, total in Russia, which by rights should have shed disastrous twilight on the Russian arms, was instead immediately followed by their triumphant success. Clearly the time, astrologically considered, is out of joint.

Experience has shown me, along with other elderly observers, that at the inception of a European war there is cer-

tain to arise a cloud of prophecies, some the outgivings of contemporary adepts, many the sayings of old-time sages, notably Merlin, St. Columba, Nostradamus and Mother Shipton. These predictions are remarkable for their flexibility, which enables them to fit any war whatever. A contemporary Parisian seeress has just obtained great fame, not by predicting the present enormous conflict, which she failed to foresee, but by predicting the death of Pope Pius X. Now, as this event has been steadily prophesied for each year since the Pope's coronation, and anyhow had to occur one year or another, the final accomplishment of the prophecy has not overcome me with astonishment.

In fact, some familiarity with the ways of prophets has considerably dulled my appreciation of them. In my earlier days I had the advantage of a tolerably complete education in the most respectable branch of all their lore, the science of astrology. There is, indeed, quite an air of respectability about this seeming science, for it is based upon the genuine science of astronomy, and a competent astrologer is obliged to be a rather well equipped astronomer. But it must be added that, while the foundations of astrology are nobly laid, its superstructure is composed of the flimsiest and paltriest gossamer. And yet, so frail is the human intellect even at its best, some of the ablest of our race have been votaries of this science falsely so called.

My instructor was a gifted woman. Most of my instruction was obtained by having the run of her library, which was rich in the almanacs and other works of the celebrated English astrologers Raphael and Zadkiel. These almanacs, besides containing a mass of astronomical and astrological data required by adepts in casting horoscopes and erecting figures of the heavens, abounded in predictions relating to the nations of the earth and their rulers and other notable personages, and a conspicuous show was made of tabulations of predictions belonging to the preceding year that had been fulfilled. The predictions, I could not but remark, were singularly lacking in precision and directness. Almost always they were tentative or darkly insinuating, merely hinting at what might or might not come to pass—an eminently advantageous method whereby the prophet would be plausibly justified in claiming credit if the prophecy became verified, or could deftly evade his error if the prophecy failed. As for predictions

fulfilled, it was obvious that the prophets were by no means exacting as to the measure of fulfilment—the burning of a haystack answered to a conflagration, the rise of a creek to an inundation, and a row at a political powwow to a revolution.

In the course of my studies I came into possession of one of these almanacs, which has clung to me through many years, and I have it by me now. It is "Raphael's Prophetic Almanac: or the Prophetic Messenger, for 1867." In this document Raphael claims for himself the exalted title of "The Astrologer of the Nineteenth Century."

According to the celestial speculum as viewed by Raphael the stars were this year virulently inimical to Pope Pius IX., Sultan Abdul Aziz and the Emperor Franz Joseph of Austria, and he as good as passes sentence of immediate death on all three of these potentates. Pius, however, did not die till 1878, nor Abdul Aziz till 1876, while Franz Joseph is still among us. In fact Raphael does not appear to have been extraordinarily expert as to deaths, for he expected Earl Russell to depart not later than November, 1867, whereas he did not actually go till 1878. But as he foreshadowed Lord Brougham's death as at about the same November, 1867, and as this death did occur only some six months thereafter, he no doubt greatly plumed himself on the exactness of his science. Indeed, in this very almanac he waxes exceedingly indignant against a certain malevolent critic who had berated him for predicting the death of the King of Belgium when he was already dead, claiming that the fact that the said King of Belgium had already died verified his prediction that he was going to die. He promises great things to the Emperor Napoleon III., opining that he would overcome his enemies and those opposed to his dynasty, though the Emperor and his dynasty sunk forever three years after. For the Prince of Wales he predicts trouble in November—which, by the way, seems to have been a particularly ill-omened month that year—through some indiscretion with a lady; this prediction probably came to pass. Furthermore, he declares that the Church of Rome totters to its foundation; but, as we see, it has managed to hold itself up to well within another century. And he exclaims, "Alas! poor Turkey," and says that the Grand Turk must bow to fate, predicting the speedy dismemberment of Turkey and a change in the face of Europe—

great events, which, however, have been reserved for our own days.

Consulting Raphael's catalogue of his predictions which have been fulfilled, we find, among the rest, a hurricane in the West Indies verified by an insurrection of the blacks in Jamaica; an increase in the price of bread fulfilled by a rise in the price of meat; clerical disturbances threatened, and the threat made good by a desire to revise the Book of Common Prayer; the death of more than one of high standing is foretold, while a lady of the greatest distinction, it is declared, bows under the influence which is rife among females especially—in this instance the lady of distinction turns out to be the ex-Queen of France, who, however, as Raphael apologetically states, died before the influence quite got to her, and the persons of high standing are represented by a housekeeper, by a man who killed his wife and committed suicide, of unspecified station, and by a huckster who lived illicitly with a murderess. In this connection, however, occurs the most specific prediction that Raphael ventures to make. It relates to the restoration of the American Union after our Civil War, and is astonishingly emphatic, being copiously italicized and capitalized to confer on it an extra emphasis. Says he, "We long, long since predicted that the Union was broken, never to be reunited. We reiterate this, however much our theory and the base of our predictions may be sneered at by all-absorbed politicians. See our past publications." On the whole, I am bound to say that the fulfilments are of a rather insipid quality and scarcely convincing to a matter-of-fact inquirer.

Though Raphael has pre-empted for himself the function of astrologer of the Nineteenth Century, nevertheless there were others, and one of them was my instructor. The generality of astrologers of the first order are a reserved race, keeping themselves to themselves and carrying on their business by correspondence with their querents. Raphael, for example, advertised the public that no interviews with him would be granted except by special arrangement. It follows that the personalities of these mysterious beings are not as well known to the world at large as they deserve to be and as the world desires they should be. It has seemed to me that, therefore, I shall gratify a laudable curiosity by furnishing some slight account of that other astrologer of the Nineteenth Century, the gifted woman, my own preceptor.

When I set out to practice medicine I had my office in a large building which was inhabited by an exceedingly incongruous collection of tenants. One of these was the female astrologer in question. On one side of the street door was hung my sign marked "Dr. William H. Taylor;" on the other was hers, more elaborately inscribed, "Madam Oliphant, Astrologist, Phrenologist, and Ladies' Botanic Physician." Most of the tenants were women, and they were divided into two main factions, comprising the oppressors and the oppressed. There were also various subdivisions in which two or more women would be allied for some purpose of defense or offense. The male occupants, from causes partly intrinsic, but mainly extrinsic, were reduced to nonentities. As was natural enough, the place abounded in discords and rows, which developed occasionally into fights with claws, stewpans, parts of stoves, noggins, etc., and culminated at times into pandemonium. At the same time, under the malign influences prevailing, the edifice itself was constantly undergoing violent disintegration and rushing to annihilation, while the landlord did not dare to venture among us and could submit his remonstrances against the destruction of his property only from a distance.

The weaker tenantry sought to be friendly with Madam Oliphant, fearing her occult powers and also hoping some help from them; the stronger, on the other hand, scorned, defied and tormented her, regarding her as a witch of a high and most pernicious type. Madam Oliphant looked on the whole of our aggregation with sovereign contempt, mixed, very justifiably indeed, with much fear of them, especially of a certain tall, thick, strong-jawed, clamorous and ferocious Amazonian individual who was the mid-day and midnight terror of the habitation. This formidable female was moreover provided with a small ill-conditioned son and a despicable flea-ridden cat, both of whom the rest of us were, by the stress of circumstances, compelled to regard as sacred personages, not only to be endured, but ostensibly to be admired and loved. Madam Oliphant was herself in corporature squatty, scrawny and tawny, and much macerated, perhaps by long vigils and weary delvings amidst her mystical lore, and, however predominant intellectually, was but poorly equipped for a physical struggle against adversity.

Madam Oliphant was pleased to except me in her unfavorable estimate of her neighbors, because, as she was kind

enough to say, she and I both were votaries of science and the only persons in the house who had any sense, and, furthermore, because she relied on me to protect her from the Amazon aforesaid—though, in sooth, she was in this overconfident, for in my soul I felt that should the trial come I should be found incompetent to protect myself. I ought, however, perhaps to have valued her compliment much more than I did, for she rated all Americans very low indeed—which was very proper, seeing that she herself was cockney born and bred and an English artist. She prided herself greatly on this superiority, representing herself to be of vast account in her own country, claiming to be of high descent, the daughter, if I remember rightly, of the Professor of Gynecology or Obstetrics in the Veterinary College of Brummagen, or somewhere else. I recall that in communicating this fact to me she told me of a wonderful case where her father had mesmerized the clerk (or clerk, as she called him) of the faculty into a jackass, and that the clerk had never recovered from it. Thus impelled she was very prone to style herself in airy fashion "Me father's daughter," and was not above designating the lady I name the Amazon by an appellation, which I myself do not think it is well to repeat, which was liberally applied to her about the house by her enemies, and which was nothing like so classical as Amazon and was immensely less complimentary.

Such being the temperament of Madam Oliphant, the astrologist, she promptly got into trouble and remained in it the whole time she resided with us. One of the first of her disagreeable experiences was on the night when she went upon the roof of the house at half-past ten p. m. to observe a conjunction of Jupiter and Saturn. The ascent was made by means of a ladder and the Amazon surreptitiously removed the ladder, leaving the astrologist alone with the heavenly bodies. When she found her return cut off she howled and thumped on the roof lustily and one of the weaker women went to her assistance, but the Amazon knocked out the intruder by a flirt of a dish-cloth across the nose and eyes, and no one else had the temerity to interfere. She dropped down at last somehow, and subsequently, while expressing to me her intense indignation and horror at the atrocity perpetrated upon her, she reproached herself for not foreseeing it, as she could readily have done, she said, inasmuch as at that time Venus was af-

flicted by Mars in the twelfth house, the house of enemies, sorrows, tribulations and imprisonment. She explained that Venus was her natal star, which possibly was so, though I should not have inferred it, and that the Amazon was ruled by Mars, which was probable enough, unless, indeed, Mars was ruled by her. A conclusive proof of her affiliation with Venus, as she pointed out to me, was a pronounced dimple in her chin, a mark which, as she assured me, was indubitably bestowed by Venus, though, in fact, I always surmised that this dimple was originally the product of a propelled brickbat or such like object.

Thoroughly imbued with a sense of her superior intellectuality and of the dignity of her character as a celestial artist, she set out on the day following her experience on the roof to reprove the Amazon for her unbecoming behavior and to formulate for her a severe line of conduct which she was to be commanded to pursue for the future. To reach the apartment of the Amazon it was necessary for Madam Oliphant to go through a long passage, up a flight of stairs, and through another long passage. At this very time the Amazon was apparently engaged in her devotions, for the house was reverberating with the crash of one of her favorite anthems:

"My dyin' day's a-rollin' ar-r-roun',

Make ready for to go."

Madam Oliphant proceeded and presently the anthem ceased and a minute or two of silence ensued. Then came a screech, which could be identified as belonging to the astrologist, and a clatter upstairs indicative of a most rapid and determined change of position. Then came the fall of some ponderous object with a noise comparable to the bursting of a sizable tank and the rush of many waters, and then screeches innumerable and cries of "Elp! Elp!" The alarmed inhabitants all flew out to see what was the matter, whereupon we beheld the astrologist wringing wet, pattering the lower passage at her utmost speed, trying to make her own abode, and the screaming Amazon behind her poking her on with a broom. At this sight all of us beholders forthwith fled to our own domicils and locked ourselves in—all except John Bunyan Wodkins, the very vivacious small child of our weakest woman, who slid down the banister like lightning into the street vociferating:

"Rip, slip! Set 'em up agin!

All down but nine."

Parenthetically, I will remark that I

had been considerably warmed towards John Bunyan by reason of his caustic criticisms of the Rev. Dr. Fatpotrick, who, after a fearful denunciation in his Sunday morning sermon of hell and everlasting torments upon mankind at large and upon his flock in particular, had left his affrighted hearers and paid a pastoral call on John Bunyan's mother, who was one of his parishioners, and deprived John of his dinner by cheerfully devouring the whole of the cabbage and pie.

Madam Oliphant escaped, more by the forbearance of the triumphant Amazon, I am persuaded, than by her own abilities, and hermetically sealed herself in for the rest of that day.

According to her statement, rendered to me a day or two after, she was politely and with respectful emphasis directing the Amazon to stay upstairs in her own passage together with her son and cat, and on no account to intrude on the lower passage, on which the astrologist's apartments were located, when, without warning, she murderously rapped on the top of the head with the straw part of a broom and mercilessly poked in front, rear and flank with the stick part of it. The attack was so unexpected and terrible that she thought it prudent to withdraw herself from a creature so irrational and degraded, which she accordingly did with some rapidity, and was descending the stairs when the Amazon suddenly overturned upon her a large tub of water with the last week's wash in it. She sunk under this, overwhelmed, strangled and smothered by it, and remembering that Venus was then in Aquarius, a watery sign, and hastening to combustion in the eighth house, the house of deaths, she resigned herself to giving up the ghost on the spot. But a most venomous poke in the small of the back from the broom handle roused her strength and nerved her for flight, which, thanks to some beneficent celestial configuration or other, she effected successfully.

These are but samples of what this high-born and high-minded, but ill-starr-ed artist was required to undergo. Some of her afflictions were much worse and harder to endure. Neither the dignity of her vocation, nor the lordliness of her mien, nor the withering scorn with which she contemplated through the crack of her door the Amazon and her aiders and abettors availed anything. Her sole resource was derived from the powers of her science. These, as she informed me,

enabled her, by "setting a figger," to discover the most auspicious periods for setting out on a journey to the other end of the house and to know whether she should probably get back alive. Finally, after many blood-curdling adventures among pot-lids, ash-pans, dish-cloths, buckets of soap-suds, and so forth, in desperation Madam Oliphant determined to invoke the majesty of the law in her behalf. It was her irrevocable purpose, she declared, to command the summary intervention of the Lord Mayor of the city. With this view she betook herself to the official residence of the Hon. Joseph Mayo, who at that date was the Mayor of Richmond.

I encountered her as she was returning from her interview with the Mayor. She was in an excessively flustered and fiery state as she communicated the circumstances of the conference. Said she, aspiring with astonishing vehemence: "Your Lud Mayor his han 'uge hold hass. Says Hi, 'Me Lud, 'ere Hi'm come with the hexpectation that me father's daughter will never get back hinto 'er 'ome with 'ole bones hagain to hinform your Ludship that you should govern your town with more sense than Hi find you hexhibit. You should henforce your townspeople, hespecially your townswomen, to treat the harts and sciences with respect.' 'E cocked hup 'is hold heyehat me, hand, says 'e, 'Oo hare you, Mum?' 'Me Lud,' says Hi, 'Hi ham Madam Holiphant, Hastrologist, Phrenologist hand Ladies' Botanic Physician.' Says 'e, 'Hif you don't go hoff hont o' 'ere, hand damn quick—Hi think 'e said damn, 'e looked hit—'Hi'll 'ave you hincarcerated for a 'ighway robbing hold 'ag.' 'Me Lud,' says Hi hin han hintendention hextremely cutting haccet of voice, 'Hi bid you a very good harfternoon,' hand turned my back distinctly hupon 'im hand strutted hout hof 'is tribunal. Did you hever?"

Her scorn of our Mayor and her indignation at his reception of what she characterized as her humble happeal at the foot of the throne, and her exasperation at things in general, were certainly very profound. But a few hours afterwards these emotions were in a measure overshadowed by a feeling of triumph, for, as she gloatingly announced to me, she had set a figger and ascertained that Saturn, the greater infortune and the significator of our Mayor, was afflicted by being in his fall in no aspect to any planet, wholly peregrine, and unfortunate, and aspecting by quartile the cusp of the tenth (the

personator of kings, princes, kaisers and mayors), thus presaging Mayor Mayo's speedy and overwhelming downfall, overthrow and damnation—which, I may add, did actually befall, not above ten years afterwards, when the city was captured by the Federal army.

At last Madam Oliphant's tribulations became altogether unendurable, and so one morning we awoke to find that she was no longer with us, having departed, as the saying is, between two suns, and without compensating the landlord for such shelter as he had been able to vouchsafe her. Some months afterwards I saw an advertisement of hers in a Baltimore newspaper, wherein she still proclaimed herself to be an astrologist, phrenologist and ladies' botanic physician, and this is the last scrap of knowledge I have ever had of Madam Oliphant. It would gratify me to know her further career and ultimate fate, but this gratification is, I suppose, now unattainable.

I have intimated in the beginning of this screed that our own science of the present day is not free from superstitions. The existence of some of these we scarcely suspect, and there are others which many of us would not willingly recognize even were they plainly pointed out. It would be a commendable enterprise, and a not unprofitable one, were a medical scholar having a comprehensive knowledge of both the science and art of medicine to search out these superstitions and unsparingly expose them.

As this article has been prompted by some of my meditations on the great war, perhaps I may be permitted in concluding to offer this additional reflection. Every one must have been struck by the lamentations engendered by this outbreak of barbarism over the failure of Christianity and by the despairing talk about the blight that has fallen upon the Christian world. The Christian world? There never has been a Christian world, and at no time has there been a real Christian in it. Even among the original twelve, the apostles themselves, were the traitor Judas and the prevaricating and pugnacious Peter, who continued his unchristian courses in his squabbles with St. Paul. The primitive Christians, so called, had their contentions, which were often intensely malignant, nor were they averse to pious rascality, to the point even of falsifying the sacred writings. While the church was feeble and suffered persecution it made some approximation to Christianity, but when it became strong it began and continued a series

of atrocities upon the heathen, upon the Jews, upon the unbelievers, and upon its own brotherhood, not surpassed by the horrible villainies recorded of the savage warriors of the Holy Land, whom to this day it has taught its children to venerate as men after God's own heart.

The Christianity of our own time, Protestant Christianity especially, has well-nigh side-tracked divinity and thrust itself into politics, medicine and legislation, striving to effect, and to a great extent succeeding in effecting, the vile and menacing union of Church and State. Its aims and its devices for accomplishing its aims, with a thin veneering of the heavenly, are solidly worldly, and from the slough into which it has mired itself we hear its ministers bellowing prayers for the success of "our party" in the election, and its laity yelling hymns of jubilation over victory at the polls. No wonder that such Christianity, having wantonly forfeited the veneration and respect of mankind, good and bad, is futile to prevent war, or any other sinful lust.

The Christian world? Why, if we can trust what is told of him, we may plausibly question whether, in all respects, Christ himself was a Christian. The sad truth is that human nature is not adapted to Christianity, and at its normal rate of progress towards moral perfection ages must yet elapse before it renders itself fit to practice the exalted precepts of that sublime religion.

The Borderland of Insanity.

By W. C. Ashworth, M. D., Greensboro, N. C.

The borderland of a condition so dreadful as insanity is fortunately not the thing itself. It may be compared to the borderland of science, of religion, of crime, of society, or of respectability even, it may at times suggest the gleam of reality, but happily, I repeat, they are not the same.

Some may say, however, and I do not know, upon second thought, that we can contradict them, that the subject of the borderland of this condition realizes more of mental torture than when the mind has actually wavered. "To be or not to be: that is the question." From the time when life first begins to be conscious of itself until the cycle reaches where experience has trained some mind to ask—Is this all that life really is and have I played the game well and after all failed?—there must come a time when the mind will project itself across the borderland and hesitatingly ask—Is this

where I am to remain?

If in this condition where it can thus question, it may be close to the borderland: yet so long as the power of questioning its true relationship to man and things remain, that mind is not yet lost.

Let the circumstances which may cause an individual to question thus persist whether he will or will not become insane is determined by a number of factors to be hereinafter mentioned.

Life is something more than the ensemble of functions which resist death. Life is also the sum total of certain environmental factors which are constantly being added to. If food can be found to feed the nervous system of the average individual, he can continue to take care of the factors, which in his day go to make up the sieges of his life, also whatever additional determining elements are put upon him by the demands of the present day progress. But there comes a day in the life of nearly every individual when the question of his breaking is a mooted one. That some do break we unfortunately have too many evidences. This suggests another thought, viz: that my subject presupposes no inquiry into the cause of chronic insanity: the affliction of that unfortunate class whose promised land Nature, even before they were born, inscribed in the baby book of life! these miserable, painful and unproductive lives which cause those of us who consider ourselves sane to question the wisdom, or at least the charity, of the great over-ruling mystery of life. The sufferings of the chronic insane are as nothing compared to those of the unfortunate in whom memory has not lost its acuteness but constantly at least infrequently, recurs to painful facts of experience until reason is on the verge of dethronement. It is possible that under less ruthless social conditions he would recover that mental and physical poise which would undoubtedly make, in his children at least, for better manhood than he represented—But he is on the borderland. He unfortunately lives in an age where society preys upon the helpless. He becomes abnormal, perhaps his abnormality is due to heredity, to injury, to disease and chronic starvation of both body and soul. Environment may have accentuated any or all of these. Environment also may and does play its part with our borderland cases, but as I said in the beginning of this paper, the borderland case of insanity is not insanity itself. It is a lamentable fact that everything seems to conspire

against the unfortunate individual. He looks in vain to find a place that he has a right to occupy—this is repeated often again and again. If nothing intervenes to break—shall we say the trend of this morbid mind—a purpose is found not as in the thief to prey upon society, but out of the doubts and fears and final awful anguish comes a determination on the part of this human being to end that which now has simply become no longer life, but merely a thing for which he no longer cares. Would you be surprised if you saw an individual who was thus harassed ascend the stairs of the approach to a noble, though perhaps a somber building and enter to reappear no more? Follow him to the door, look above it, and you will find carved in letters of stone—"only suicides enter here if he is the father of children then the weakened nerve fiber of the borderland case of this generation first described may develop in some of his children of the next generation, if not insanity, then tuberculosis, or cancer, or epilepsy, or idiocy, any one of which may be the substitute. If not these dreadful signals, we may find a child very stupid, when measured by the rules of the school, or one vicious when compared with the more circumspect children of the neighbors. We may also find, but less frequently, one whom we often speak of as a genius, if not this, then he may be remarkable along some one line or a number of lines.

If the children of this borderland father have also a borderland mother, then they are doubly handicapped in the race of life. These are the families that furnish us with so many strange contradictions. Perhaps out of a large family but one child will grow up with the reputation that the average good citizen enjoys.

The remainder may become thieves, or prostitutes or liars or never do wells; or they may exhibit traits of character in action which keep them under constant distrust of their fellows. This can result only in their final failure to accomplish anything of value, to say nothing worse, either for themselves or the community in which they live.

We are at a place now in the consideration of our subject where the logical finale of this border line of insanity is often found. It is hard to skirt the ragged shores of a subject like this without touching the rocks. I have tried to show that if the unfortunate who is verging on the borderland of insanity does not cross the line in his own character, he

may do so in that of his children. My concern then, in this paper, is not with the children of parents who placed their progeny over the line at their birth, but rather with the individual who will likely bequeath the mental weakness which he may have acquired through the absence of his intellectual or other functions, giving to his children perhaps that which for a better term, we will call the insane instinct. These children, then, belong to a class that excite our concern; they have not necessarily abused themselves but nevertheless have been mightily abused and that too in most instances before they were born.

And when to this prenatal environment is added the punishment they are receiving as a result of modern progress, they are twice punished. Many of them are now in our public schools. Here, from a parentage that has rioted with the nervous system in varying degrees, is dumped a child to be moulded, if possible, in the same way as the majority, are formed. He may be called "backward." This usually means that he is developing slowly, but nevertheless he is ruthlessly being brought into competition with the child that is to an exceptional degree mentally active. In struggle to hold even a place in the procession many of both types unfortunately acquire forms of nerve exhaustion that add much to the sorrow and distress of their adult life. When to it all is added the probability of a denial of parental encouragement in the home, with its lack of healthful discipline combined possibly with poverty of viciousness or some form of chronic ill health, chronic or functional ill health in one or both parents, would it be surprising if such a child should have borderland symptoms at some period of its life? Under the blue canopy of the cloudless sky such a child is still enveloped in clouds. The mountain of education enveloped in clouds is before him; he sees the mountain but cannot peer through the clouds. Adolescence is the clearing station where are written the terms on which life, from the standpoint of the nervous system is to be continued. It is the period of our development when heredity asserts itself and where new phases of life and character are revealed. The child who is excessively nervous; the child who is hysterical; the child who has the habit of exaggerating facts with fancies; the child who is a chronic liar; the child who is not a good sleeper and especially if it suffers from night terrors and is depressed on awakening, the child

who is noted for eccentricity of conduct; the child who suffers from constipation and whose intestines are habitually distended with gas, the child whose urine shows an excess of oxalates and phosphates; the child who suffers from vomitor, perversions, cold hands cold feet, dry skin, and blue hands and moist palms, each one of these types should be known and marked for observation while in school as to what his tendencies are and imperative means taken for their corrections, this is especially important if these prodromes have extended over a period of years, that this has not been done will explain much that makes the borderland of insanity in the adult a reality. There are other realms within whose confines are to be found additional causes for the primary origin of the borderland case of insanity. Among those of the most far reaching importance are those that grow out of the home. The first to be mentioned is the woman who is never satisfied, who sees in her neighbor a rival, not unhappily on the basis of intellectual attainments, but from the morbid phase of clothes or automobile or summer cottage; the woman who is continually looking for the affection which she has not earned and therefore does not deserve, the woman who at every turn makes false claims on the bounty of her husband far beyond his ability to give, crowding him finally into a place where love and ambition and hope are all but lost, the woman who designedly has but one child and that usually by accident and who often develops, after a time, characteristics which make her as far as relationship to her family is concerned, a parasite.

One of the most pathetic things in life is a man burdened with such a life in addition to his own, staggering along his weary way, under the weight of it. Happily such a one is usually oblivious to that which is so patent to his friends and neighbors. It would be humorous if it were not pathetically tragic when such a martyr in all good faith tells his friends of the good qualities of his wife and how much she has done for him and how grateful he is to the good God for giving her to him. To the observer on the outside must come always the question in an instance like this, whether both the parties to such a union are not, after all, equally near the borderland of insanity, and when it all ends, as not infrequently it does end, by the weary sufferer mistaking the mere exhaustion

of his body and mind for an evidence of degeneration, then rather than suffer pain and decrepitude he pursues the course of his convictions to the point of self destruction.

It is not necessary to assure you along the lines just indicated that the woman who plays fast and loose with the greatness of life and its glorious possibilities dwarfs ambition and withers effort in those on whom she is dependent. No one but nature can punish her and too often this means that the innocent are punished too. That woman suffers in like measure from bad husbands is unfortunately true. But together or separately and especially where children are concerned, they add more to the sum total of human misery in this country than any other factor in it which enters into the problem of the nervous system.

Another fruitful source for the instability of the nervous system in both the young and in those who are often not old is the ignorance of the correct physiology of the sexual system. My time is so limited, however, I will not undertake to discuss the advisability of having this subject taught in our public schools. I advise a thorough study of the science of eugenics for the solution of this difficult problem. It has not been many years since we were all amused at the word "Americanitis", coined by a clever writer to describe the shaky condition of American nerves. The name neurasthenia has been given to this protean type of nerve exhaustion, the civilized nations of the world have awakened to the fact that they have it too, this condition of chronic tire, of chronic exhaustion, this attitude of the mind in which a man wants to do something but the ability to do it is denied him. The most hopeless part of my subject perhaps is any attempt to point out a method for preventing a borderland case of insanity from crossing over. It must come about in our day mainly by the education of the individual to his possibilities along the line of mental discipline.

In addition to this, the medical profession must continue to teach that just in so far as man or woman violates the common sense every day facts of experience, viz, the marriage of the mentally and physically unfit, they will be punished according to the laws of nature, whose laws are inexorable. But it will be generations before men and women select their mates as the farmer now determines the breed of his cattle.

It does not take long to tell a lawyer to give up his work or the physician that he should greatly limit his practice or say to the bookkeeper that he should rest his weary hand. Yet in spite of all, when it comes to the question of dying of hunger or living a wretched life all will prefer to continue working and that is the principal reason why there are so many borderland cases.

The Uses and Abuses of the Pituitary Extract in Labor.*

By Virginus W. Harrison, M. D., Richmond, Va.; Associate in Obstetrics, Medical College of Virginia.

Man's inhumanity to the pregnant woman is shown by their apparent, if not real negligence of the study of obstetrics, for until recent years it was deemed by the public that nature could care for most cases especially when they were attended by any one who had a medical diploma upon the wall of their office, or in lieu of the doctor, a good substitute was a rotund old negro woman with a white cap and a bottle of ergot.

Dr. J. Whitridge Williams¹ in his presidential address to the American Gynecological Society stated that in the thirty-eight years of the society's existence, only twenty-seven papers on obstetrics were considered by him excellent.

Much has been written² recently in popular papers about the "Twilight Sleep" as carried out in Germany. Great expectations has been aroused in the pregnant woman's mind, of a peaceful, painless sleep and a safe awakening with a healthy babe by her side. They are so anxious that their doctor should be well posted on this method, that they have mailed marked copies, for their doctor to post himself, and be ready when she needs him. They are not aware that the scopolamine-morphine anesthesia was used by some of the best men, and in the best hospitals in this country as early as 1902, where accurate records were kept as to the results and was abandoned by hospitals in this country as early as 1902, where accurate records were kept as to the results and was abandoned by such men as Green³ Whitridge Williams, Hirst, DeLee and others, as possessing no advantage over the present method of anesthesia and at times more dangerous to both mother and child.

Many recommendations have been made, instruments devised, and drugs ex-

perimented with for the comfort, safety and the shortening of the length and severity of labor, after being tried most of them have been found to possess no great advantage.

The forceps were introduced, used and much abused, until at present their use is much more restricted than formerly, yet they will always retain a valuable position in the obstetrical kit.

The introduction of the germ theory of disease and its application to puerperal infection has probably saved more lives and prevented more morbidity in the parturient woman than any one advance that has been made, yet so heated was the discussion on both sides, that one Virginia gentleman reminded his opponent that he had not forgotten how to use his pistol.

The discovery and administration of anesthesia to women in labor has given more comfort, and lessened the anxiety of the pregnant woman more than any one advance that has been made, though it took the good Queen Victoria to down its opposition when first introduced.

Recently the extract of the posterior lobe of the pituitary body, has been brought forward as a substitute for the forceps, as a time saver in labor. This agent has been used both wisely and recklessly, and in some cases without the care that a new remedy should receive, until its possibilities and limitations have been more carefully studied and definitely settled.

It is my purpose in this paper to consider in some of its phases the uses and abuses of the pituitary extract, with the hope that the discussion may serve as a basis to formulate some conclusions which will aid us in the proper use of the remedy on the one hand, and on the other hand to definitely fix our mind, that there are definite contra-indications.

There is no definite standard⁴ as to the method of manufacture of the remedy, even all the preparations of the extract have the size of the dose marked on the container according to the manufacturers own formula. At one time we may use a strong preparation containing Gm .2 and the next time the weaker preparation containing Gm .1 to the cc; thereby the results may not be what we expect. The extract is dispensed in ampoules of one cc each and in bulk; the former is considered better as regards dose and effect. The remedy is given intramuscularly or subcutaneously. There is no local action if given aseptically, though alcohol will decompose the agent if any is left in the syringe when washing it. If much chlo-

*Read at Virginia State Medical Association, October 27-30, 1914, Washington, D. C.

reform has been given the patient before the extract is given the effect will be lessened, on the other hand my experience teaches me that less of the anesthetic will be necessary after the use of the remedy.

The dosage depends upon what is to be accomplished, if only slight increase of pain is desired, one ampoule of Gm .1 will be sufficient, whereas if the contractions must be increased greatly to overcome the resistance, twice the quantity will be needed. I have never seen the agent take over six minutes to act, and I have never seen it fail to produce some results. The contractions last from thirty minutes to one hour, so that one hour is about the time for the second dose if it is required, and the third dose in another hour. If no effect is produced in one-half hour, as shown by the increase in both severity and number of the contractions, I would try the second dose in a half an hour, then if no results would deliver by other methods, there would be no use to try the agent further.

The physiological action of the posterior lobe of the pituitary body on the uterus is to cause a rhythmical contraction of the muscles, in a similar but more rapid and powerful manner than in normal labor. The extract also causes contraction of the walls of the bladder, having more effect upon the distended bladder, than one only partly filled, the agent also causes contraction of the intestinal muscles, as shown in my cases, 20 per cent. had a movement of the bowels without a laxative, and in no cases did the bladder have to be emptied with a catheter.

The blood pressure⁸ is markedly raised in the first administration, up to twenty points, with an average of eight according to some author. The second dose does not cause as much rise as the first. This elevation of blood pressure should be remembered in using the remedy in a patient with disease vessels.

No definite toxicological⁹ symptoms are recorded either in the mother or child that can be absolutely put upon the extract. They may have been reported but I have not seen them. This being important to know it will be of interest to study the drug in this respect.

One of my cases (Case History No. 764) had a marked attack of angina pectoris in two minutes after the drug was administered, which soon passed off without treatment. Among the children I have seen no evil effect except that which might have been produced by birth trauma. The children do not have any more asphyxia than after prolonged labor. One

child (775) born of a primiparae, aged 38, had convulsions for several days after birth which may have been due to the pituitary extract, though I believe it was due to injury in the foetal head. This woman was seen in consultation with Dr. Hillsman. The "waters" had ruptured several hours before. The head was in the superior straight and the os was thoroughly dilated, progress was slow on account of weak contractions. The extract was administered, Gm .1 the pains were instituted in four minutes, and the child advanced to mid-pelvis when the pains again became weak, at the end of an hour the second dose was given, with a renewal of the contractions and the advancement of the child to the floor of the pelvis, the third dose was advocated, but the patient who had been a nurse before her marriage said she preferred the forceps and positively refused to take the third dose. Immediately after delivery the baby became blue and was with great difficulty revived by Dr. Hillsman, and in a few hours had a convulsion to be followed by numerous others for three days, when they ceased, the child apparently making a good recovery. The future will have to disclose how complete the recovery has been. Similar reports have been made by F. W. Wilkinson³ of Montgomery, Ala., and H. S. Sheffield⁴ of New York City. Their cases were in children that were not delivered by forceps, this does not prove the fact that they did not have convulsions from birth trauma, as some of the severe injuries of the brain result from injury in normal deliveries. In the case reported by Sheffield the convulsions did not start until the infant nursed its mother, and as soon as the nursing was discontinued the convulsions ceased.

Contra-indications. Normal Labor.—We are never justified in using the pituitary extract without a very definite indication, and to save time for the doctor is not an indication at all. High blood-pressure of arterio-sclerosis; nephritis with insufficiency; an exhausted uterus requires rest before giving the agent; disproportion between the child and pelvis, either from an enlarged child or a contracted pelvis, if marked is a distinct contra-indication; undilated cervix, tumors blocking the pelvis.

The drug will not as a rule induce labor pains nor start an abortion with sufficient certainty to be relied upon, the consensus of opinion being that the pituitary extract will not originate pains, but intensifies these already present. In placenta praevia with the os completely dilated or dilatable, with engagement of the pre-

senting part sufficient to control hemorrhage, the remedy may be used if for any reason more powerful pains or haste is desired, usually, however, in cases of placenta praevia when engagement of the presenting part has occurred naturally or artificially no haste is desired until after the delivery of the child, when the pituitary extract will be of service in hastening contractions of the uterus so as to prevent hemorrhage by shortening the third stage of labor.

In twin pregnancy I should think it would be well not to give the extract until after the delivery of the first child and the second one well engaged, the remedy is of great service here to hasten the contraction of the ever distended uterus.

Indications.—The indications must be definite, and I wish to specially emphasize this point, as the remedy is capable of doing immediate, severe and serious, if not irreparable damage to the soft parts of the mother, it may also destroy the child in a rapid delivery. The agent is so prompt and powerful in its action, that the doctor should be prepared for emergencies and gloves ready before the remedy is administered. An anesthetic should be at hand in case the action is more severe than desired. An other important thing to remember is never to leave a patient who has taken the extract, until she is delivered or the pains have subsided to require other means to terminate the labor.

Uterine inertia is the most frequent condition which will require the use of the extract. When the pains begin to lag, the progress is slow and the patient shows weariness, one dose will often convert what would have been a high forceps operation into a low forceps case, and the second dose will convert the low forceps case into one of complete delivery without forceps.

Certain conditions must be present in inertia as well as all other indications for the use of the extract. The os must be well dilated or severe tears will occur, the cervix has been completely severed and delivered with the child. I think it better that some engagement should occur before administration, for unless this engagement does take place after the os is dilated, I am always suspicious of some disproportion between the passage and passenger, or some mal-position. If the extract does not deliver the child it is lower in the pelvic axis, and has dilated the soft sucs to a greater extent than if it had not been used.

The agent prevents to a great extent the shock incident to instrumental ex-

traction, prevents post-partum hemorrhage, and requires less anesthesia, the patient being in the same condition of the "Twilight Sleep" because she forgets her trouble in the joy of the birth of her baby. This is most of what is claimed for the scopolamine-morphine anesthesia, unless dangerous doses are administered.

While inertia is the one indication, for the use of pituitary extract, sometimes the resistance of the pelvic walls and floor will need just a little more vis-a-tergo, and this can be furnished by the agent under consideration. Post partum hemorrhage is not only prevented, but will be controlled by the administration of the extract. It is also used to shorten the third stage of labor when desirable. My own experience with the remedy has been limited, yet very satisfactory, as in my last fifty cases of labor I have used the forceps only three times, twice after using the extract and once where the remedy was contra-indicated by a large child, the mother refusing cesarean section. In the fifty cases I used the extract fifteen times, in the previous fifty cases I had used the forceps twelve times. My first failure with the extract (Case History 743), was in a very delicate primiparae, aged 30, with a posterior position. She was given two doses of gm .1 each one hour apart, with very satisfactory increase of pains, but the patient became tired out and was delivered with forceps very easily. My second failure was (775) also a primiparae, aged 38, who had been in labor for twenty-four hours. The first dose increased the pains in four minutes, with a descent of the head in about thirty minutes the pains began to weaken; the second dose of the same size gm .1 again gave very satisfactory results, but would only bring the head of the child to the perineum, the third dose was advised but the patient requested forceps, with full anesthesia, which was granted. This patient was the one whose child was reported above as having had convulsions.

Both of my failures were more apparent the real. In the first place I usually administer the one cc of gm .2 instead of gm .1 as in both of these cases, and again one was delivered on account of the condition of the physical exhaustion of the patient, the second one refused to take the third dose.

Some authors claim that it should not be given to primiparae, but with them I cannot agree as my happiest results have been with women in their first labor. I brought out in another paper that as severe lacerations of the perineum could occur when the extract is used as when a

moderately severe forceps extraction is done. If the dose has not been too large, and we resist the rapid expulsion with an anesthetic, plus pressure upon the head of the child, the laceration should be in a measure prevented.

As we learn more of the remedy, we can use without abusing and get more satisfactory results, especially if it becomes standardized, so that we can regulate the dose.

All of my cases of multiparae had been delivered by forceps in their previous labors, and some of them had had several such deliveries, with the loss of a child each. With pituitary extract the multiparae were delivered with living children, in fact I have never seen a child born dead when the extract was used. I realize my cases are too few to say that the same results will keep up.

This agent not only is a valuable one but is a very dangerous one, and should be used with extra-ordinary care, and in conclusion I wish to mention some of the bad things it can do, viz; tear the cervix; rupture the uterus; detach the placenta prematurely; may cause a hemorrhage from the uterus if it has been an hour between the time the dose was administered and the delivery of the child, but another dose will control the bleeding. It is also capable of producing birth trauma in the infant, just as we may have this injury in normal labor. It may cause apoplexy by increasing blood tension.

(1) Journal A. M. A., June 6, 1914.

(2) Ladies Home Journal, September 14, 1914.

(3) Southern M. J., August 14, 1914.

(4) A. J. Obstetrics, February 14, 1914.

(5) See A. J. Obstetrics, October, 1914.

(6) Since writing this paper, it has been standardized, according to Roth's method (Armour & Co.)

401 N. Allen Avenue.

The Medical Man's Relation to the Prohibition Problem.

By T. D. Crothers, M. D., Hartford, Conn.

Every advance of medical science shows that prohibition is very intimately related, and follows as a most natural result. By prohibition, is meant the complete abolition of alcohol as a beverage, and its very narrow limits as a medicine.

For more than a century clinical studies have shown the direct and indirect injuries from the use of alcohol as a beverage, contradicting the traditional theories of the tonic and stimulant value of spirits in any form.

The great reform wave of 1840 in which

it was said that nearly 2,000,000 persons signed a pledge to abstain from all use of spirits, was the beginning of a great reform and philanthropic effort, to in some way diminish the evils from the use of alcohol.

It was a recognition and an effort to overcome the evils that were dimly foreshadowed in every section of the country. Laymen and theologians decided that pledges, prayers and educational work were the most practical means of prevention that could be used.

Others taking a more severe view of the subject, believed that punishment, suffering and force, were the most practical preventive measures. The late Dr. Turner, the pioneer physician of the world, who organized the first inebriate hospital at Binghamton, New York, contended that alcoholism and inebriety must be recognized as diseases, and studied and treated along medical lines. His views were far ahead of the times and are just beginning to be recognized in connection with other means, for the cure and prevention.

Theories of philanthropists and reformers have grouped together so many conflicting facts, showing the injury as a beverage, and its value as a medicine, and attempted to draw dividing lines that were safe and reasonable.

The confusion that followed from these theories startled the scientist who determined to examine the subject scientifically. Thus Dr. Richardson in 1870. Prof. Sims Woodhead, Sir Victor Horsley of England, Bunge, Kassowitz and Kraepelin of Germany and other scientific men in France, took up this subject from a laboratory point of view, and by exact studies and researches sought to determine the effects of alcohol on cell and tissue.

As the result of several years work the most over-whelming evidence was gathered, against the use of spirits as a beverage, as a tonic and stimulant. They showed by the strongest evidence possible that the effects of alcohol on the tissue, were anaesthetic, depressing and the fascination for its use, came from its narcotic action, diminishing fatigue, discomfort and covering it up.

Curiously enough, these scientists frankly stated that the studies which they made, began from a strong personal bias, as most of them were moderate users of wines and beers. The conclusions which they reached were so antagonistic to their previous conceptions, they all became prohibitionists and declared against the use of alcohol as a beverage.

Notwithstanding the evidence which has been slowly gathering along this line, there

are still defenders of alcohol as a beverage; theorists who believe that it has a medicinal action, and urge their views, founded on the traditions of the past.

The one great fact which every observer confirms is that the action of alcohol is corroding and destructive on cell and tissue, that it is anaesthetic in diminishing the functional activity and slowing the processes of nutrition and development. A good illustration of its real action is seen in the effects of chloroform and ether, which are only concentrated forms of alcohol and its ethers. In other words it is a paralyzant, and thus is one of the most dangerous of the foods and fluids in common use.

Still farther research work points out states of degeneration and disease tendencies which are traceable to this one cause that take on most complex symptoms and disorders.

The teaching of advance science, show that a large part of the diseases and social evils of today, are preventable, and that it is owing to our ignorance of the causes, and failure to apply means of prevention, that results in insanity, pauperism, inebriety, criminality, consumption and other wide-spread disorders.

A study of the cause of any one of these diseases show that the use of alcohol in some form or other is very active as an exciting and predisposing power, and these studies go on yearly, adding more and more to the evidence of alcohol as a degenerative agent.

There can be no possible doubt in the accuracy of predicting the presence of certain diseases and degenerative forces from certain causes, in the same way that typhoid fever germs in water and milk, will certainly produce typhoid fever.

In the economic world these facts are very strikingly confirmed. When questions of accident and losses are studied, alcohol seems to have been most prominent among the active and contributing agents. In 100 railroad accidents, a large proportion of them were traceable to failures of persons who had used spirits.

In petty crimes the same facts appear to a very large extent, and so on through the range of economics. Losses and mistakes are more and more traceable to defects that come from this source, and this has increased to such an extent, that in the business world, there is an increasing demand for total abstainers, in positions of trust and responsibility.

Financiers, and insurance companies who have no sentiment about the habits of their business associates or business relations, refuse to take any risks or become

complicated with men who use spirits. The bonding and mercantile companies find persons of this class dangerous and rate them low, or refuse to consider them in questions of responsibility.

Thus the anaesthesia and paralyzing action of alcohol is recognized from a different point of view, and all centers on prohibition as the only possible remedy. Examples are so numerous in almost every section of the country, that there can be no room for doubt.

Thus, recently a bank failed. Two of the managing officers drank spirits for years, and entered upon a speculation, which brought ruin. A ship goes down in mid-ocean with terrible loss of life. By and by, it appears that the officials had been drinking and lost their good judgment. A railroad accident in which a score of people were killed was traceable to the dispatcher who had just come from a banquet, where spirits were served.

Medical men who make careful studies of the causes of disease find that alcohol in some form is concerned and either directly or indirectly responsible for the conditions present.

The conclusion is the same here, as in every study, that prohibition is the great necessity. Find the causes and remove them, and the disease will disappear.

Every scientist and every physician who has made the subject of causes a careful study, is a prohibitionist in sentiment and conviction. He may not be identified with any party for this purpose. He may not be known in his community, as an active promoter of this special sentiment, but he recognizes that it is the absolute, unequivocal teaching of science to prohibit all use of spirits as a beverage. Its value as a medicine becomes more and more limited, with each study, and there are many scientists who declare it to be not only dangerous, but destructive to an unknown degree.

Medical men everywhere, should make a study of the facts, as the scientists and laboratory workers abroad did, and form their opinions from data of this kind, to which there can be no exceptions. The traditions of the past, however hoary with age and prestige, are no guide for the present and future. The age calls for new conceptions and new views that are accurate and literal, and not founded on the shifting opinions of others.

It is an absorbing question for every medical man to know how these facts can be made practical and literal in public sentiment. Shall he join political or social propaganda societies and follow the lead

of laymen and reformers or shall he commence independent work, founded on the facts as he sees them and state his conclusions and the reasons on which they are founded? The latter is the rational, scientific, course to follow.

Physicians of all others are best able to judge of effects from certain causes. It is their special training and province to hunt up contributing and active causes, of diseases and injuries. They of all others should be the teachers in the community. They can find the causes, when others cannot. Here is a great evil, a neuroses, afflicting all classes from the highest to the lowest, dependent on distinct conditions and not on theories or traditions or shifting opinions of enthusiastic men and women.

There is not a medical man living, with any sort of training, who is not brought face to face with conditions that come from alcohol, and is not able to advise wisely as to preventive means and measures. If he, is a moderate drinker, prohibition appeals to his good sense and judgment, and while he is not able to apply it in his own case, he knows its value and meaning.

It is always a reflection on a medical man's intelligence, who apparently is suffering from a disease which he is called upon to treat in others. When his own personal habits are on the level with laymen, who are not supposed to know the real facts, it indicates a lack of knowledge of the movements of science.

The medical man of all others should know and apply the teaching of science, not only in his own life, but in his counsel and advice on the great questions that are coming up constantly, to others.

Prohibition is one of the great remedial measures necessary to lessen and prevent an evil that is so prevalent in every section of the country. To physicians, there should be no sentiment or theories. It should be merely a question of facts and their meaning, and from this point alone, can they become the real teachers and leaders in the community.

A Notable Work on Biological Therapeutics.

A book of uncommon interest and value to physicians has just been issued from the press of Parke, Davis & Co. It is a new "Manual of Biological Therapeutics," receipts of a copy of which is hereby acknowledged by the editor of this Journal. The book is handsomely printed in large, clear type, on heavy enameled paper, and bound in cloth. It contains 174 pages of text, upwards of thirty full-page plates in color, and a number of

half-tone illustrations in black and white, together with a comprehensive index. As its title suggests, it is a concise and practical treatise on biological therapeutics, and so replete with useful information that no practitioner should miss the opportunity to secure a copy, especially in view of the fact that the publishers announce that the entire edition is to be distributed gratuitously to members of the medical profession, on individual application.

Something of the scope and value of the work may be inferred from this incomplete list of the subjects treated: Biology; Bacteria; Immunity; The Preparation and Uses of Sera; Antidiphtheric Serum; Concentrated Diphtheria Antitoxin; Allergic Reactions; Antitetanic Serum and Globulins; Antigonococcal Serum; Antimeningitic Serum; Antistreptococcal Serum; Bacterial Vaccines or Bacterins; The Opsonic Index and description of method of taking it; When Serums should be used and when Bacterial Vaccines are to be preferred; The various Bacterins and their Indications; Smallpox Vaccine; Pasteur Antirabic Vaccine; The Diagnosis of Typhoid Fever; The Agglutination Test Without a Microscope; The Agglutometer; Ehrlich's Diazo-Reaction in Typhoid Fever; Gonococcus Antigen; The Wassermann Reaction; Coley's Mixture; Coagulose or Hemostatic Ferment; Bacillus Lactis Bulgaricus; Phylacogens, their Preparation and Mode of Use; Mixed Infection Phylacogen; Pneumonia Phylacogen; Gonorrhea Phylacogen; Erysipelas Phylacogen; Rheumatism Phylacogen; Typhoid Phylacogen; Tuberculin in Diagnosis and Treatment; Organotherapy; Thyroidectin and Thyroprotein; Thyroid and Thymus Glands; Adrenalin and Pituitrin; Corpora Lutea; The Biological Farm and the Research Laboratory.

To our physician friends we suggest the propriety of writing at once for a copy of this "Manual of Biological Therapeutics," addressing the request to Parke, Davis & Co., at their home office in Detroit, Michigan. It will not be amiss to mention this Journal in writing.

Thickening of the Palate and Upper Part of the Larynx, Probably Due to Congenital Syphilis.

Lack reports three cases that showed diffuse thickening of the uvula, pillars of the fauces, and adjacent parts of the soft palate, and of the epiglottis, arytenoids, and upper part of the larynx. The condition was chronic and did not yield to

treatment by iodides, or mercury, or salvarsan. It was apparently stationary or varied very little, and showed no tendency to ulcerate. There was occasionally slight difficulty in breathing. The cases were similar to two others the author had previously shown, about which differences of opinion had arisen. In all but one the Wassermann reaction had been positive, and the diagnosis of congenital syphilis rested entirely upon this. In none of the cases had any treatment been beneficial, nor had microscopical sections of portions of tissue removed thrown any definite light upon the pathology.—Proceedings of the Royal Society of Medicine.

Syrup of Ipecac has long been a popular ingredient of cough syrups and many physicians prescribe it regularly in various combinations. It acts as an expectorant and emetic due to the action of the alkaloid cephaeline.

Syrup of Cephaeline, Lilly, is just as effective as Syrup of Ipecac and furthermore it is more reliable, of constant strength and acts more rapidly besides being much less expensive. The dose of Syrup of Cephaeline, Lilly, is the same as that of Syrup of Ipecac, hence it can be prescribed in the same amounts. Many physicians are already writing Syrup of Cephaeline, Lilly, q. s., instead of Syrup of Ipecac on prescriptions.

Quarantine in Infectious Diseases.—

Andrews (Edinburgh Medical Journal) He is of opinion that isolation of such patients is very important. Their subsequent detention must depend on the facts of the case. The doctor suggests that even an alteration of the accepted minimum period of isolation from six weeks to five would be a great step in advance. As regards the period of quarantine to be imposed on contacts, in hospital outbreaks he is content with five days. Perhaps seven days might be ample for schools. A diphtheria patient must be kept until the necessary negative cultures have been obtained. Very often the illness lasts much longer than the infectivity. As regards the quarantine period, the writer sees no use in continuing to quarantine perfectly well contacts who have given two successive negative cultures, which may well be obtained within three or four days. As regards children, at any rate, cultures should be taken from every contact and the proved carriers isolated. There is little use in quarantining contacts for a fixed period, as, unless cultures are taken, it affords no security at all. The usual isolation

period of measles is a fortnight from the period of eruption. The quarantine period for measles in hospital outbreaks is fifteen days. For rubella, Goodall's recommendation of isolation for seven days from appearance of rash seems ample. The long incubation period of this disease would appear to justify some attempt to employ the first two-thirds of it at least at school. Contacts could safely attend school for eight or nine days after exposure, and thereafter should be excluded until the twenty-first day is past. While the long periods of time in hospital spent by whooping-cough patients are of the very greatest advantage to the children themselves, in favorable circumstances and with otherwise healthy children, isolation until the whooping ceases is quite unnecessary. Of the great infectivity of whooping-cough in its prodromal catarrhal stage there is no doubt. Probably there is but little infectivity after the patient begins to whoop. Rigid isolation in a private house is probably unnecessary after the paroxysmal stage has lasted for a week or ten days. In chicken pox the author believes that a patient is infectious until the last crust has separated, but when any given crust has become naturally detached, the secondary scab forming in its place is not necessarily dangerous. As regards quarantine for this disease, the writer often allows contacts to be mixed with other children up to the eleventh day, when they are isolated until the twenty-second. In mumps he has never seen harm result from allowing patients out of isolation when a full week has elapsed after the disappearance of swelling. Exclusion of contacts from the thirteenth to the twenty-sixth day from the date of the first and last exposure respectively would be a quite safe rule for schools to adopt.

X-Ray Treatment in Exophthalmic Goiter.

The writer reports treating 16 cases of exophthalmic goiter with the X-rays. All left improved, some apparently cured. He suggests that exophthalmic goiter, the symptoms of which are apparently due to excess of thyroid secretion, is itself due to sympathetic irritation, and that Addison's disease is also due to this cause, pointing out certain features which he thinks, are common to both these diseases—pigmentation, irritable heart, digestive disturbances, etc. Cases of diagnosed Addison's disease which recover are due to the improvement in the sympathetic system. Early treatment of all cases showing symptoms of exophthalmic goiter with the X-rays is recommended. Fenwick (Australasian Medical Journal.)

Charlotte Medical Journal

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THE OSTEOPATH SUGGESTED AS A PUBLIC SCHOOL INSPEC- TOR; OBJECTIONS THERE TO.

EVIL TO HIM WHO EVIL THINKS.

That the members of the medical guild stand almost always to a man as commending statutory enactments calculated to assist in bringing about higher educational, ethical, and moral standards throughout our common country, is a proposition so generally accepted that it does not admit of debate or demand assertion. Thoughtful physicians, however, can but feel that the federal government, or rather some local officer, has gone to an extreme position in the recent suit instituted against the United States District Court of California against the editor of the "Southern California Practitioner" for sending scurrilous matter through the United States mails.

A few months since this Journal printed an article from the pen of Dr. H. O. Hyatt of Kinston, N. C. entitled "What Fools These Mortals Be", and containing some plain, outspoken, and generally recognized facts relative to the "sex question". The subject matter of the physician's article was couched in plain, but clean language, and was strong appeal to make men more moral. The facts as mentioned in the article in question, we are fully convinced, would not be denied by any reputable practitioner of experience, and while voiced in language readily appreciated, was written in the scientific spirit, published in a recognized journal of science having a circulation only among medical men, was sent through the mails only, so we are advised, to the regular professional readers of the publication, hence it is only natural that members of the medical profession should feel their rights are being infringed upon in the bringing of this suit. We shudder to think of the mental, (not to consider at all the morals) attitude toward the opposite sex of individuals who consider the verbiage and illustrations sound in so many medical publications as "vulgar" or "obscene". In true scientific spirit one portion of the human anatomy is treated precisely the same absence of sex consciousness as another, and woe to the lowgraded mentality who views pathology from any other standpoint. Evil to him who evil thinks.

The osteopathic practitioners of Columbia, S. C., have given to the public of that progressive southern city a printed statement to the effect that:

"A partial investigation of the public school children of this city discloses the startling fact that considerably more than half of the pupils have spinal curvature or some other defect of the spine or chest. Because of this serious state of affairs, the osteopathic physicians of the city have decided to institute an energetic campaign for the prevention of the grave results which follow in such a large proportion of these cases, also for the purpose of materially reducing the back troubles in children. * * * Classes will be organized for systematic work in muscle-building. * * * But more important will be the adjustment of the spine in individual cases by osteopathic correction. * * * The committee in charge will provide free treatment for all deserving cases."

All of which forcibly recalls to mind the fact that the last session of the South Carolina legislature voted adversely on the proposition to establish a system of public school inspection by competent medical practitioners; and also that the legislative action on this important public health measure met with the cordial approval of the Governor. It also suggests the query: Is it possible the citizens of this splendid old state, following the lead of its state capital are to have palmed off on them the disgusting mass of pseudoscientific stuff inevitably to be distributed on a long suffering public in the wake of advertising opportunities offered by this clever scheme of the Columbia body manipulators.

There is no phase of practical medicine that calls for a greater degree of real scientific anatomical and physiological knowledge than is required for competent school inspection. In some quarters it has grown fashionable to assume that any physician be he possessed of ever so little technical information or experience, (or for that matter a school teacher oftentimes is proposed for this service;) is fitted to examine school children for defects. Rarely has a more serious mistake been made, for the reason that it requires a greater degree of accurate professional knowledge of correct body formation, growth and development, to be enabled to readily discern the faulty structure of children than it does to make similar ex-

aminations of adults. In the former, there are tardy developments, localized atrophies or retardations, overgrowths or excesses, which necessitate both technical knowledge and the wisdom of ripened experience to properly weigh and determine whether they are of incidental character fitting normally in their proper relation as time passes and the child grows older, or whether such aberrations are such as demand the early attention of the skilled surgeon for their immediate rectification.

Unquestionably all who have given thoughtful consideration to this important matter will agree that to properly appreciate what nature will correct and determine what are should remedy, calls for the exercises of expert technical knowledge possessed only by individuals who are both good anatomists and skilled physicians.

Observant physicians have long known, and it appears that it is about time that well informed laymen should also be almost equally cognizant of the fact that perfectly normal chests, or spines, or legs, or arms, or nasal septi, are like perfection in mind or morals; very largely idealistic and infrequently seen in real life. If adult examination shows so limited a number of perfect spines, it is more than probably correct to say that even a larger number of children have more or less slightly deviated spines; but when we recall the method of connecting the vertebrae, it is absolutely impossible for an intelligent man of sound mind to accept the "adjustments" about which the osteopaths prate so glibly as really more worthy of the name of science as would be the idle vapors of a trained parrot.

That all well rounded medical men should and do give the subject of spondylotherapy thoughtful study and learn to appreciate its importance ought to be manifest, on the simple assumption that perhaps every proposed creed or belief, whether it be in morals or medicine, contains more or less of fact enveloped though at times in an enormous chaff pile. Certainly we are always in a better position to combat error when we have familiarized ourselves with a knowledge of its nature, and for this very reason medical men ought to understand rational spondylotherapeutics, its value in selected cases of certain diseases, and its limitations. Then it becomes with him a matter of choice or convenience as to whether such treatments are administered under his direction by a masseur, a masseuse, or a manipulator of human

body anatomy by some other name. No knowledge belittles its possessor. All knowledge can but be helpful and enlarging.

But the ridiculously absurd claims of the average osteopath to "adjust the spinal bones," to "reduce" dislocations where none ever existed, or to trace the source of even infective maladies to "displacements" of the bones of the vertebral column, are propositions so ineffably silly as to merit the censure and condemnation of intelligent physicians always, and it is very doubtful if our duty to the public is discharged without improving every proper opportunity presented us to inform it as to such unfounded claims resting upon no substantial etiologic or pathologic basis.

With this view of the matter of osteopaths in relation to school inspection, it manifestly behooves the medical profession of our sister Carolina, and its charming capital city, to see to it that the passing fad of osteopathy (for will it not pass into innocuous desuetude, leaving always a scant impress behind, as have other similar "pathies" of the past?) by securing a foothold in the school inspection, where it will be used for probable advertising purpose, does not actually retard or set back fully half a generation this important professional work of school inspection by disgusting the public with its extravagant pretensions. We trust not, but insist there lies a professional duty to the public right here in our sister state.

J. H. W.

CLASS "A" AND CLASS "B" MEDICAL SCHOOLS SHOULD BOTH CONTINUE EDUCATING PHYSICIANS.

Though the organized American medical profession in the forties announced the elevation of the standards of professional medical education as one of its purposes, during the following fifty years only limited advances were made. With the close of the past, and the beginning of the present century however, a pronounced change came over the spirit of leaders of medical thought in America, and the past ten years have wrought noteworthy changes in medical teaching aside from the natural elimination of nearly fifty per cent. of the former medical colleges of the nation.

Now that the number has been reduced probably, nearly, or quite to the minimum number we shall likely see during this generation, it is of interest to enquire something as to the desirable limitations

of medical colleges as regards their classification by the Council on Education of the A. M. A. Of course it is assumed that while all classifications are more or less arbitrary, and mayhaps at times unjust, the subject in certain instances of possible criticism, just or unjust, yet it is believed by those in position to know, that the work of this Council has been of tremendous benefit to both profession and schools, as well as helpful to the people served by them. No one may truthfully assume the work of classification is perfect, or that there were not errors made. But bettering of standards is the desideratum, and that it seems is in a fair way to be accomplished. Medical schools classed by the Council as D have rightfully discontinued, and in doing so have done the least that could possibly be required of them by either profession or public. Temporarily, at least, schools classed as C are in some places continuing with a B classification dangling in front as their speedy goal to which quick attainment must be made if they remain in existence. Practically, the work of making doctors of medicine has been standardized in America to an extent it would have been thought impossible of accomplishment half a generation ago, and schools are placed in position where for the tuition fees received, a definite something must be given in return, and their diploma must carry with it a degree of scientific knowledge of medicine and its allied sciences.

As practical men, it is manifestly demonstrated that, for the present at least, we may not go farther in this work of elimination, of schools than the reducing to the grades of A and B, or to be more precise, the grades of "A-plus," "A" and "B." The distinctions between "A-plus" and plain "A" schools will likely continue, and doubtless should for obvious reasons. But should class "B" schools continue in the work as such? To this interrogation, with a strong belief in high standards of personal and professional education, with a strong belief in high standards of personal and professional education, answer must be made affirmatively for the next generation at least or even longer.

From the intimate contact with a preceptor for three years and teachers in medical colleges who were every-day practitioners of medicine and surgery, to the all-time professor who does not practice at all, as witnessed in the well endowed ultramodern medical schools was a long jump, and it is safe to say a sufficient time has not yet passed to demon-

strate positively at the bedside, exactly how much is real betterment of the degree of medical skill exercised, and how much is merely the strapping on of adornments which may, or may not, actually enhance the wearer's positive ability to successfully cope with disease in its prevention and its cure. Not a word is to be said in deprecation of the highly useful work of the modern medical laboratory, but it is to be borne in mind, that laboratory efforts and results, while useful and extremely helpful in their way, are but incidents in the real everyday work of the busy doctor of medicine with his multifarious duties and responsibilities; and are very, very, far indeed, from constituting the major, or even, a very large portion of his professional equipment. With the passing of years it is inevitable, that the fulltime professor will grow farther and farther away from the practical application of the subjects he teaches his classes, until it may become a serious question as to his actual capacity to impart practical instruction. It is here there will in all probability continue to exist a necessity for the existence of class B schools to co-ordinate and to secure the balance between full time and practicing teachers which will in the finality of things determine which type of medical college makes the best doctor to treat sick people. The problem presented is an interesting one and suggested by the opening season of the medical colleges being at hand. That there will continue to exist a clearly defined demand for class B medical schools is our deliberate judgment and in so stating, no injustice is meant toward, or disparagement of, the splendidly endowed schools that are an adornment to American medicine and afford in their exhaustive laboratory equipment opportunities for the study and working out of chemical, physiologic, and therapeutic problems well nigh closed without their facilities.

J. H. W.

DIABETES.

Horowitz reports 102 cases, in 52 of which the glycosuria completely ceased and most of the patients had been allowed to return to fairly ordinary diet. In 70 there was active autointoxication as shown by indicanuria. The treatment consisted in the use of the Bulgarian bacillus, and the antidiabetic diet.

In simple cases without acidosis and with a glucose output of 16 grams daily or less, he gives five cc. of a culture standardized at 300 millions to the cc,

half an hour before meals and retiring. To those excreting up to 25 grams of glucose he gives 8 to 10 cc. and to worse cases 16 cc. at each dose. Acidosis also calls for large doses, as lactic acid tends to prevent the formation of acetone. In marked indicanuria better results follow adding cultures of the glycobacter peptolyticus of Metchnikoff.

THE VALUE OF GOOD HEALTH.

Good health is the most valuable asset that a nation or people can possess. To some who subordinate everything else to the mad chase for the almighty dollar this may appear to be an exaggerated statement, but if any one will stop long enough to consider the pain, suffering and loss caused by preventable diseases alone not to say anything of hereditary weaknesses and defects, he will as Virchow once said about diphtheria antitoxin "be compelled by the brute force of facts" to admit the truth of the statement. Every student of history knows that all down through the ages great waves of pestilence, plague and malignant diseases have swept over the earth, decimating nations and at times nearly depopulating whole countries. According to the historian Hecker twenty-four millions of people in Europe alone were destroyed by the plague.

In the one hundred years between 1700 and 1800 A. D. one hundred million people died in Europe from smallpox alone over one half the population in some epidemics falling victims to that once terrible scourge.

So widespread and so deadly was smallpox before the discovery of vaccination that people lived in constant terror of the disease and it cast a pall of gloom over their whole lives. Well might the thought of it cause them to shudder because as the historian Macauley tells us at one time nearly every man and woman in London was disfigured or marked by the disease. When Jenner made his great discovery of vaccination the sunshine of hope flashed over the world and the dark night of fear and dread disappeared never to return. We of the present time pride ourselves on the progress we have made and the high degree of civilization to which we have attained; and when we consider our magnificent churches splendid educational institutions and public buildings not to say anything of the enormous skyscraping edifices which house our great business and commercial enterprises we have good reason

for this satisfied feeling. If, however, we stop to ponder the fact that six hundred thousand people in the United States die of preventable diseases every year and that while our government is spending millions of dollars a year to prevent and stamp out diseases among animals scarcely anything is being done to protect human beings, we at once are impressed by the fact that we still have a great deal of very important work to do. Knowledge and trained minds to use it are the keys which have unlocked the the doors to all the mysteries that have ever been revealed; they have given us all the blessings we possess and on them we must rely for any advances that we make in the future.

FOOD FADISTS.

This has become a special field for cranks with exclusive systems of diet. They lay great stress on shredded beef steak; dry stale bread; hot water flushings; grain flakes; peanut butter; shredded wheat biscuits; puffed rice; postum; eating nothing but fruits and grain. No canned goods, while animal food is an *abomination*.

Just observe their dietary and you "will live long and prosper."

Then there are those who would cure, or prevent, the ills of the flesh with "soma-tose," "sanose," "trophenine," "protose," "bromose," "granose," grapenuts, etc., etc. Now I think, except with hard working men, there is too much nitrogenous food used, but it does not follow that any one should attempt to live on an exclusive vegetable diet. Meat contains elements necessary to make good red corpuscles.

For one in health to confine his dietary to these food fads will reduce his strength and sap his vitality.

NON EST.

In these latter days when special practice is the rule, the family doctor of bygone days is almost "Non est inventus." The teachings of medicine, the tendencies of such, and the changes in science, developed upon research and progress in the art, have developed a fashion for specialists.

The specialist gets royal fees yet has none of the hardships of the general practitioner and both of these things are great inducement for young men to choose a special line of practice. They know it is much easier and vastly more agreeable. Then too it pays big fees whether deserved or not.

Still, what will the sick do without the general practitioner? The specialist does

no work after office hours while the general practitioner's work has no end, night or day. The hard worker, who ministers to all sorts of ills, cannot be dispensed with.

Editorial News Items.

The North Carolina State Board of Health prepared and distributed to churches and schools throughout the State an elaborate program for the observance of "Tuberculosis Day" November 20.

The Sixth Councillor's District Medical Society of North Carolina was held in Raleigh, N. C., October 30, Dr. A. W. Knox, Raleigh, President. The meeting was held in the parlors of the Central State Hospital for Insane at Raleigh, and the entire body were the guests of the Superintendent, Dr. Albert Anderson at luncheon during the sessions of the Society. Medical expert witnesses were considered and it was arranged that an effort be made to secure legislation from the next sitting of the legislature to provide for the employment of expert witnesses by the state as advisers of the court, and abolish the present custom of allowing medical witnesses to be introduced and regarded as appearing in the interests of plaintiff or defendant.

The importance of a state colony for inebriates was considered and a committee of Drs. Albert Anderson, F. R. Harris, and T. M. Jordan will memorialize the legislature to that effect.

Dr. Anderson outlined to the Society the urgent needs of the State Hospital and urged their co-operation in securing the needed betterments.

A Urological clinic has been established for the treatment of indigent patients at Charlotte, N. C., Drs. A. J. Crowell, R. S. Thompson, E. J. Squires, and R. H. Lafayette constitute the attending staff.

At Elizabeth City, N. C., on October 24, 1914, amid a scene of brilliant beauty and solemnity, Miss Ada Aydlett Burfoot, the accomplished daughter of Mr. and Mrs. Noah Burfoot, became the wife of Dr. William Evans Lester of McColl, S. C. Dr. Lester was a student at the University of North Carolina, a graduate in medicine of Tulane University, and a rising young Aesculapian of South Carolina.

Dr. J. G. Pittman of Gaffney, S. C., has resumed practice after a vacation doing postgraduate work in New York City.

Dr. B. B. Steedly of Spartanburg, S. C., has returned to his professional duties after an extended study of surgical work in eastern cities.

Work will begin shortly on the new fire-proof addition to the Mission Hospital at Asheville, N. C. It will cost \$50,000.00, be of brick and cement construction throughout, and will represent the last and best work in modern hospital construction. It will represent only one wing of the proposed new Mission Hospital, being constructed in such way as to admit from time to time of the additions being made without altering the original plans.

The Georgia State Sanitarium has joined the "cotton holding movement" to the extent of its trustees at a recent session affirming their intention to hold the sixty bales of cotton grown on the farms of the institution until ten cents per pound is realized.

Dr. C. T. Wyche of Newberry, S. C., Speaker of the South Carolina House of Representatives, who was stricken with apoplexy last winter while presiding over the legislative body, has regained his former state of health to a marked degree and is now daily presiding over the legislative sessions being daily held in the South Carolina state capital.

The U. S. Public Health and Marine Hospital Service announce the selection of the Georgia State Sanitarium at Milledgeville, Ga., as a place where the service will install two pellagra experts for the purpose of making a study of the disease as prevailing among the insane patients cared for by the state in the institution.

Dr. J. T. Strait, State Senator from Lancaster County, S. C., and a member of the present S. C. legislature who was appointed by Gov. Cole Blease Superintendent of the South Carolina State Hospital for Insane at Columbia, Vice Dr. J. W. Babcock, resigned, resigned his seat in the State Senate October 13, and was immediately confirmed as Superintendent State Hospital by the State Senate.

The committee of the South Carolina State Board of Health has located the proposed State Tuberculosis Sanitarium, or Tuberculosis Camp, at State Park, near Columbia, S. C., and it is expected that work on the buildings will begin shortly.

The Mississippi Valley Medical Association recently met in Cincinnati, Ohio. At this meeting, Dr. Hugh Cabot, of Boston, was elected president and Lexington, Ky.,

was selected as the next meeting place in October, 1915.

Dr. R. H. Hardin was married to Miss Eulalia Austin in the Knox Presbyterian Church, Charlotte, N. C., on November 11. Dr. Hardin is from Catawba County and is located at Boone, N. C. He graduated from the North Carolina Medical College in 1914. Miss Austin is the daughter of Dr. and Mrs. J. A. Austin of Charlotte, N. C.

Dr. J. L. McKay, of Kings Mountain, N. C., died suddenly at the Sanatorium in Gastonia on Friday night, October 2nd. The cause of his death was apoplexy. Dr. McKay was 72 years old and had been practicing medicine in Kings Mountain since about 1885 and was one of the most prominent physicians in that section of the country. He will be missed by a wide circle of friends.

Dr. S. J. Hawes of Dover, N. C., has returned from a stay of some months in attendance upon the N. Y. Polyclinic and the Mayo Bros. clinic of Rochester. He has removed to Lumberton.

Dr. C. S. Mangum of the University Medical School at Chapel Hill, N. C., by invitation addressed the Mecklenburg County Medical Society on the evening of October 9th, in Charlotte, N. C.

The Executive Council of the Tri-State Medical Association of the Carolinas and Virginia announce the acceptance of the invitation of the Medical Society of South Carolina, Charleston County, to hold the seventeenth annual session of the Association in Charleston, February 17 and 18, 1915.

The South Carolina State Board of Health at a recent session adopted measures and regulations looking to a strict enforcement of the vital statistics statute enacted by the last session of the state legislature, which the board expects to rigidly enforce from the start.

The Children's Clinic of Columbia, S. C. to be opened in November, and to deal scientifically, as well as practically, with the many intricate social and hygienic as well as medical and surgical problems confronting child life, bids fair to prove a most useful addition to the excellent institutional service of this progressive southern city.

Dr. John B. Wright, Lincolnton, N. C. after postgraduate work in ophthalmol-

ogy has located at Raleigh, N. C. and will practice with Drs. R. H. Lewis & K. P. Battle Jr. of that city.

The will of the late Solomon Weill, Goldsboro, N. C. leaves bequests to various charities including \$1,000.00 to the Goldsboro, N. C., Hospital, \$1,000.00 to the University of N. C. and \$2,500.00 to the Jewish Orphanage in Atlanta, Ga.

The attractive and commodious new building of the Medical College of South Carolina at Charleston, S. C. has been completed and will be occupied during the present month.

In the passing of Dr. Wm. J. Lumsden at the age of 68, at Elizabeth City, N. C. on October 14, 1914 the profession of medicine in Eastern Carolina loses one of its brightest ornaments, and society one of its most useful members. Entering the Confederate Army in 1861 as a cadet at the V. M. I., he served to the end of the war. Later he taught school for several years and in 1872 was graduated Medical Doctor by the University of Maryland. He located in Elizabeth City, N. C., and there spent the remainder of his life, an active and successful practitioner, a loving and sympathetic friend, a patriotic citizen. For many years he was an active and honored member of the N. C. State Medical Society and served by appointment of Gov. Elias Carr in 1895, one term on the N. C. State Board of Health. In 1912 Dr. Lumsden suffered a fall from which he never fully recovered remaining partial invalid until his demise.

The Fifth District Medical Association of South Carolina was organized by the Councillor, Dr. M. J. Walker, of Yorkville, at Chester October 12, 1914. Officers elected as follows:

President, Dr. E. W. Pressly, Clover, S. C.

First Vice-President, Dr. Frank Ferguson, Gaffney, S. C.

Second Vice-President, Dr. Samuel Lindsay, Winnsboro, S. C.

Secretary-Treasurer, Dr. Geo. A. Hennes, Chester, S. C.

The initial regular meeting will be held at Rock Hill, S. C., November 18, 1914.

Much interest is manifested at Wilmington, N. C., over the recommendations of their alert local board of health advocating the removal of the present pumping station which furnishes the mu-

nicipal water supply from a point quite near the city, to the mouth of Toomer's Creek, a distance above and beyond the city that will insure absolute freedom from the present possibility of sewerage contamination.

Peter Jeffries, colored, of Raleigh, N. C., was convicted and sentenced to thirty days on the county chaingang, September 29, for obstructing the City Health Officer when recently vaccinating the prisoner's sister, a pupil in the city schools.

Hospital Sunday collections at Asheville, N. C., recently yielded \$850.00 which sum went to the benefit of the Mission Hospital of that city.

At Asheville, N. C., on the night of October 1st, a destructive fire partially destroyed one of the principal buildings of the Winyah Sanatorium. The patients were promptly cared for, all escaping without injury. It is understood the burned building will at once be replaced with a new structure with enlarged capacity.

The North Carolina State Board of Health have moved into their handsome new quarters and are now occupying the entire fourth floor of the former Supreme Court building opposite the capitol building at Raleigh. The entire building has been refitted, and the offices and equipment of the executive offices of the board now compare, as does the splendid work being accomplished, with the outfit and output of the best state boards of health.

The City of Asheville, N. C., is preparing an exhibit illustrative of the health conditions of the famous city and Western North Carolina.

The regular monthly meeting of the Buncombe County Medical Society was entertained at "Crowhurst Farm," the country residence of Dr. H. H. Briggs, near Asheville, N. C., on October 19. "Otitis Media" was the subject of the paper after which a delightful repast was served at 9 p. m. around a huge bonfire on the lawn where more than 70 invited guests were seated on logs. Appropriate music, a possum hunt, with various and sundry speeches, impromptu and prepared, completed a menu that was both unique and satisfying.

At "Lynnholm," in Four Oakes, N. C., on October 15, 1914, Dr. Benjamin Royall of Morehead City was married to Miss

Annie M. Adams. After November 15, Dr. and Mrs. Royall will be at home in Morehead City, N. C.

Dr. C. F. Strosnider, Mount Olive, N. C., is doing post graduate work in the Eastern cities at the conclusion of which he purposes after January 1st, 1915, locating in Wilmington, N. C.

Dr. R. Vance Brawley, Salisbury, N. C., who has been doing post graduate work in Baltimore, Md., has returned and resumed practice.

Dr. Wm. Weston, Columbia, S. C., has been selected as Chief of Staff of the new children's clinic opened in that city October 16. All indigent children of the city under 15 years of age will receive free examination, medical, surgical and dental treatment. The building is new, being specially built recently for the purpose, and it is asserted unsurpassed in equipment by few cities of less than half a million population.

An Orangeburg, S. C., court recently awarded one of its citizens \$100.00 damages for an assault performed upon the said citizen by another citizen putting oil of mustard on his back.

Dr. M. S. Ingraham, an aged physician residing near Greenwood, S. C., shot and probably fatally wounded a young man named Julius Rauton in an altercation in the country store of the former on October 16, 1914.

The Virginia Medical Society Meeting.

The forty-fifth annual session of this society was held in Washington City October 27-30, 1914, in the auditorium of the New Willard Hotel.

The local committee of arrangements consisted of the following: Dr. John R. Wellington, Chairman Ex-officio; Dr. A. Barnes Hooe, Chairman; Dr. A. R. Sands, Vice-Chairman; Dr. P. S. Roy, Vice-Chairman.

The officers consisted of: President, Dr. Stephen Harnsberger, Catlett, Va.; Vice-Presidents, Dr. R. C. Bryan, Richmond, Va., Dr. J. Staige Davis, University, Va., Dr. B. R. Gray, Newport News, Va.; Treasurer, Dr. Mark W. Peyser, Richmond, Va.; Secretary, Dr. Paulus A. Irving, Farmville, Va.

The Executive Council were:

Dr. Chas. V. Carrington, Chairman, Richmond, Va.

Dr. A. L. Gray, Clerk, Richmond, Va.

State at Large:

Dr. Chas. V. Carrington, Richmond, Va.

Dr. Powhatan Moncure, Bealton, Va.

Dr. Geo. J. Tomkins, Lynchburg, Va.

Dr. H. Stuart McLean, Richmond, Va.

Dr. A. L. Gray, Richmond, Va.

First District—Dr. Clarence Porter Jones, Newport News, Va.

Second District—Dr. E. C. S. Taliaferro, Norfolk, Va.

Third District—Dr. H. U. Stephenson, Toano, Va.

Fourth District—Dr. Joel Crawford, Yale, Va.

Fifth District—Dr. H. S. Belt, South Boston, Va.

Sixth District—Dr. Jno. R. Garrett,, Roanoke, Va.

Seventh District—Dr. L. M. Allen, Winchester, Va.

Eighth District—Dr. T. A. Parker, Leesburg, Va.

Ninth District—Dr. R. H. Woolling, Pulaski, Va.

Tenth District—Dr. P. E. Tucker, Buckingham, Va.

The following program was practically carried out beginning Tuesday evening, October 27, 1914.

The Society was called to order by the President, Dr. Stephen Harnsberger, Catlett, Va.

Invocation—Rev. J. Henning Nelms, Washington, D. C.

Address of Welcome to the National Capital—Dr. Wm. C. Gorgas, Surgeon General U. S. Army, Washington, D. C.

Response on behalf of the State of Virginia—Hon. Carter Glass, Lynchburg, Va.

Address of Welcome on Behalf of the Medical Society of the District of Columbia—Dr. Wm. A. White, Washington, D. C.

Response on Behalf of the Medical Society of Virginia—Dr. Stuart McGuire, Richmond, Va.

Address of the President—Dr. Stephen Harnsberger, Catlett, Va.

Report of Executive Council.

Report of Judiciary Committee.

Report of Committee on Election of New Members.

Report of Legislative Committee.

Report of Necrological Committee.

Report of Delegates to the American Medical Association.

Report of Treasurer.

Report of Secretary.

Reception and dance given by the Medical Society of the District of Columbia to the Medical Society of Virginia and Ladies.

Wednesday, October 28, 1914.

9 a. m.—Meeting of the Executive Council.

Morning Session 10 a. m. to 1 p. m.

10 a. m.—Report of Clinical Cases (Five minutes for each report.)

Subject for Discussion: Diseases of the Thyroid Gland.

(a) Causes—Dr. R. M. Taliaferro, Lynchburg, Va.

(b) Pathology and Symptoms—Dr. J. C. Flippin, University, Va.

(c) Medical Treatment—Dr. Geo. W. McAllister, Hampton, Va.

(d) Surgical Treatment—Dr. Shelton Hansley, Richmond, Va.

Papers.

The Heart in Diseases of the Thyroid and Other Glands of Internal Secretion—

Dr. Alex. G. Brown, Richmond, Va.

Discussion—Dr. P. S. Roy, Washington, D. C.

The Medical Profession and the Public—Dr. Chas. W. Webb, Bowling Green, Va.

Latest Results and Views on the Therapeutic Value of Mercury in the Treatment of Germ Diseases—Dr. H. E. Jones, Roanoke, Va.

(a) Lipomatosis and Atrophy of the Pancreas.

(b) Calcification and Ossification of the Wall of the Heart—Dr. Harry T. Marshall, University, Va.

Therapeutics Through the Mother—Dr. Richard Mason, The Plains, Va.

Psychoneuroses in Their Relation to Chronic Infections—Dr. J. Allison Hodges, Richmond, Va.

Dr. W. G. Morgan entertained the visiting ladies and doctors at luncheon at 1 p. m.

Afternoon Session 3 to 6 p. m.

Standardization of the Surgeon. End Results in Cases of Appendicitis—Dr. G. Paul LaRoque, Richmond, Va.

Some Diagnostic and Prognostic Values in Renal Conditions—Dr. Leslie B. Wiggs, Richmond, Va.

Reflex Vesical Irritation—Dr. J. N. Upshur, Richmond, Va.

The Uses and Abuses of Pituitary Extract in Labor—Dr. Virginius Harrison, Richmond, Va.

Superstition in Medicine—Dr. W. B. Barham, Newsoms, Va.

The Clinical Importance of Pulmonary Embolism—Dr. J. McCaw Tompkins, Richmond, Va.

Sarcoma of Both Ovaries in a Child of Three Years—Dr. F. H. Smith and Dr. J. C. Mottley, Abingdon, Va.

Wednesday Night 8 to 10 p. m.

Symposium—Placenta Previa:

(a) Etiology, Pathology and Diagnosis of Placenta Previa—Dr. B. H. Gray, Richmond, Va.

(b) Treatment of Placenta Previa—Dr.

Jno. F. Winn, Richmond, Va.

(c) The Necessity of the Study of the Foetal Heart Sounds in Placenta Previa—Dr. Greer Baughman, Richmond, Va.

(d) The Caring for Premature Infants—Dr. St. Geo. T. Grinnan, Richmond, Va.

Discussion—Dr. Geo. Tucker Harrison, Charlottesville, Va., Dr. Hawes Campbell, Enfield, Va., and Dr. W. L. Harris, Norfolk, Va.

Indications and Technique for Caesarian Section—Dr. Stuart MacLean, Richmond, Va.

Psychnalysis in General Practice—Dr. A. L. Tynes, Staunton, Va.

Discussion—Dr. Tom A. Williams, Washington, D. C.

Thursday Morning, October 29, 1914.

9 a. m. to 1 p. m.: Symposium-Trachoma.

(a) The Cause and Prevalence of Trachoma—Dr. Taliaferro Clark, Invited Guest, U. S. P. H. Service, Washington, D. C.

(b) Trachoma, an Important Public Health Problem and the Methods Adopted for the Control of this Disease in Eastern Kentucky—Dr. John McMullen, U. S. P. H. Service, Washington, D. C.

Discussion—Dr. Thos. F. Staley, Bristol, Va., Dr. S. C. Bowen, Richmond, Va., Dr. James Morrison, Lynchburg, Va., Dr. Jos. A. White, Richmond, Va., Dr. Geo. J. Tompkins, Lynchburg, Va., Dr. Clarence Porter Jones, Newport News, Va., Dr. C. R. Dufour, Washington, D. C., Dr. C. M. Miller, Richmond, Va., Dr. H. S. Hedges, Charlottesville, Va.

The Conservation of Vision—Dr. Jos. A. White, Richmond, Va.

The Midwife Problem in Virginia—Dr. W. A. Flecker, Richmond, Va.

The Watkins Operation for Repair of Prolapse in Older Women—Dr. Chas. R. Robins, Richmond, Va.

The Medical Society of Virginia in its Relation to the Health of the State—Dr. W. M. Phelps, Staunton, Va.

Thursday Afternoon 3 to 6 p. m.

Report of Executive Council, Election of Officers, Committees, etc.

What are the Proximate Principles of Nutrition?—Dr. Theodore Hough, University, Va.

Discussion—Dr. Jno. B. Nichols, Invited Guest, Washington, D. C.

The County or Component Societies, Their Relation to the State Society—Dr. Southgate Leigh, Norfolk, Va., Chairman Committee on Organization of County Societies.

Acute Haematogenous Infection of the Kidney—Dr. Francis R. Hagner, Washington, D. C.

The Influence of Atmospheric Conditions

on the Vital Processes—Dr. Jno. B. Nichols, Invited Guest, Washington, D. C.

Two Reasons for Therapeutic Nihilism—Dr. S. W. Dickinson, Marion, Va.

Some Further Consideration of the Use of Vaccines in Oto-Laryngology—Dr. C. M. Miller, Richmond, Va.

Colonel Wilder in Command of Fort Myer gave a cavalry drill to the ladies and members of the Medical Society of Virginia.

Thursday Night, 8 to 10 p. m.

Acidity, Alkalinity and Anaesthesia—Dr. Geo. W. Crile, Invited Guest, Cleveland, Ohio.

Discussion—Dr. W. P. Carr, Washington, D. C.

Symposium-Fractures.

(a) The Prognosis and Conservative Treatment of Fractures, Notably End Results—Dr. W. P. Carr, Washington, D. C.

(b) The Open Treatment of Fractures, Its Technique—Dr. A. R. Shands, Washington, D. C.

(c) The Diagnosis and Prognosis of Fractures of the Skull—Treatment of Sequences—Dr. Hugh M. Taylor, Richmond, Va.

(d) X-Ray Diagnosis of Fractures, from a Medico-Legal Standpoint—Dr. A. L. Gray, Richmond, Va.

The Early Treatment of Club Foot—Dr. W. P. Mathews, Richmond, Va.

Tortion of the Omentum With and Without Gangrene—Dr. C. Coleman, Richmond, Va.

A buffet supper was given by the Medical Society of the District of Columbia to the Medical Society of Virginia and invited guests at the New Willard Hotel, at 10 p. m.

Friday, October 30, 1914, 9 a. m. to 1 p. m.

A Report of Forty-Six Cases of Tuberculosis Treated by Artificial Pneumothorax—Dr. J. J. Lloyd, Catawba Sanatorium, Va.

The Tragedy of the Late Diagnosis of Tuberculosis—Dr. B. L. Taliaferro, Catawba Sanatorium, Va.

Comparing Mercury with 606 in Treating Syphilis—Dr. M. C. Sycle, Richmond, Va.

Sanitary Work of the United States Army Medical Officers at Vera Cruz—Dr. T. C. Lyster, Invited Guest, U. S. Army, Washington, D. C.

Discussion—Dr. Jno. B. Noble, U. S. Army, Washington, D. C.

The Attack on the House Fly—Dr. Mosby G. Perrow, Lynchburg, Va.

Discussion—Dr. L. O. Howard, Washington, D. C., Dr. Bland Williams, U. S. Navy, Norfolk, Va.

Unfinished Business.

Introduction of President-Elect.

Adjournment.

Col. Jno. L. Phillips in command at the Walter Reed Memorial Hospital gave a reception to the visiting doctors and ladies.

Representatives of the Medical Departments of the United States Army, Navy, and Marine Hospital and Public Health Service were present.

Dr. Harnsberger, the President, read a very able address. It was scholarly and well delivered and was received with a great deal of applause. He made a fine presiding officer and in all probability this meeting with his energy and influence was one of the best in the history of the Virginia Medical Association.

BOOK NOTICES.

Nervous and Mental Diseases. By Joseph Darvin Nagel, M. D., Consulting Physician to the French Hospital of New York, Member New York Academy of Medicine, Honorary Member Societe Royal de Belique, etc., Physician to St. Chrysostom's Dispensary. New (2nd) edition, revised and enlarged, 12mo, 293 pages, with 50 engravings and a colored plate. Cloth, \$1.00, net. (The Medical Epitome Series.) Lea & Febiger, Publishers, Philadelphia and New York, 1914.

The author of this book has mastered to an unusual degree the art of concise statement, with the result that a surprising amount of essential matter is presented in very full detail. In the process of condensation the tendency is naturally to omit matter which may be of substantial value to the student, but the volume under consideration is singularly free from such omission. The revision has been most complete. Several sections have been practically rewritten and substantially enlarged. Changes in classifications particularly of mental diseases, have brought the epitome into complete accord with the most advanced thought. The plan of presentation is so orderly as to render the vast amount of condensed information presented most readily assimilable. The illustrations are numerous and well chosen, showing characteristic clinical types and schematic presentations of nerve tracts and connections.

The undergraduate who masters this compact volume will find himself possessed of a thorough grasp of the fundamentals, while the busy practitioner will find in it a most useful aid to memory. The sets of questions reviewing each chapter are

supplemented by a list of questions selected from recent State Board examinations, which will be most valuable to the student who desires to test his own knowledge or to prepare for examination.

The Practitioner's Visiting List for 1915.

Four styles: weekly, monthly, perpetual, sixty-patient. Pocket size; substantially bound in leather with flap, pocket, etc.; \$1.25, net. Lea & Febiger, Publishers, Philadelphia and New York.

This is a practical convenience which, once possessed by the busy medical man, immediately becomes indispensable. It is a matter of common remark that most forms of pocket memoranda are admirably designed to further the immediate and permanent loss of the data it is desired to preserve. This, happily, is not the case with this carefully designed Visiting List and pocket consultant, which is the final evolution of 30 years' experience in meeting and anticipating the needs of the practising physician.

It affords a simple and complete system for keeping the records of daily practice. In addition to the ruled pages for daily calls and their notes, general memoranda, addresses, cash account, etc., it contains specially arranged spaces for data desired for permanent record such as births, deaths, etc. The value of such records is best appreciated by the physician who has been suddenly confronted by the necessity of producing such data after the lapse of years and in the absence of an orderly system for its preservation.

If the record blanks constitute a complete and thoroughly convenient record of practice, effectual insurance against financial loss or an overburdened memory, the supplementary text constitutes a handy reference work of equal value in practice or emergency. Among the useful features are tables of weights and measures and comparative scales; a scheme of dentition; incompatibles; poisons and antidotes; directions for effecting artificial respiration; an extensive table of doses; an alphabetically arranged table of diseases and remedies; table of eruptive fevers; instructions for urinalysis and directions for ligation of arteries.

Practical Homoeopathic Therapeutics. Arranged and compiled by W. A. Dewey, M. D., Professor of Materia Medica in the University of Michigan Homoeopathic Medical College; Member of American Institute of Homoeopathy; Corresponding Member of the

British Homoeopathic Medical Society, and of the Societie Francaise D'Homoeopathic; Author of "Essentials of Homoeopathic Therapeutics," etc., etc., etc. Second Edition Revised and Enlarged. Philadelphia: Boericke & Tafel. 1914.

The present edition of Practical Homoeopathic Therapeutics is devoted to homoeopathic prescribing exclusively. The indications for the remedies given are those born of the experience of the foremost prescribers—the successful men—of the homoeopathic school of medicine, and may therefore, be considered as trustworthy.

The therapeutic progress of the school, since the publication of the previous edition, has been incorporated, including all new remedies which are homoeopathic in genesis and action.

The chapters devoted to diseases of the heart, tumors, tuberculosis, enteric conditions and others have been recast and improved, and there have been added sections on the therapeutics of adenoids, arterio-sclerosis, goitre, prostatic affections, infective conditions, surgical shock and neuritis.

There are 426 pages of text in this volume and a splendid index which adds considerable to the value of the book.

Motherhood. By E. S. Harris, M. D., Bridges Building, Independence, Mo.

This is the sixth edition of this little book on motherhood which should be in the hands of every expectant mother. The author's object in publishing it was to put in the hands of his patients a safe and reliable guide through the stages of pregnancy, confinement, and the lying-in state, and to so instruct them that they may be able to avoid so many indiscreet things usually considered of little importance but which are fruitful of so many evil results.

Childbirth is a natural process, yet many women become invalids after giving birth to one or more children and usually owe their condition to carelessness and uncleanliness.

The price is ten cents per copy. Specimen copy mailed for ten cents.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume III, Number IV. Octavo of 254 pages, 65 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published Bi-Monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

The articles contained in the August number of Murphy's Clinics are as follows:

Murphy's Clinical Talks on Surgical and General Diagnosis.

Arthroplasty of Hip.

Ascending Root Neuritis Following Amputation of the Cauda Equina Close to the Conus.

Malignant Papillomatous Cyst of the Breast Differential Diagnosis. Operation.

Paralytic Ileus From Cryptogenic Peritonitis.

Old Ununited Colles' Fracture. Open Reductions—Nailing of the Fragments.

Left Facial Nerve Paralysis of Congenital Origin. Macrognathia. Spinofacial Nerve Anastomosis.

Paralysis of the Right Facial Nerve the Result of a Basal Skull Fracture. Fracture of the Styloid Process. Spinofacial Nerve Anastomosis.

Intra-Uterine Fibroid. Hysterectomy. Paget's Cancer.

Carcinoma of the Rectum with Ulceration. Illac Sigmoidostomy. Radical Excision.

Sarcoma of Humerus.

Cerebellar Tumor. Suboccipital Decompression.

Congenital Luxation of the Patella. Reduction. Excavation of a Groove in the Femur for its Lodgment. Plastic Operation and Imbrication of Joint Capsule to Hold it in its New Position.

Recurrent Luxation of Left Patella. Internal Imbricating Flap Operation. Paralysis of Right Leg with a Flail Joint at the Ankle. Arthroideisis.

Postoperative Ventral Hernia Following Appendiceal Abscess. Imbrication Operation.

Educating the Child at Home. Personal Training and the Work Habit. By Ella Frances Lynch, Founder of the School of Individual Instruction. Harper & Brothers, Publishers, New York and London. MCMXIX. Price, \$1.00.

This is a practical book which literally comes home. It may well serve as a guide for mothers and all others responsible for the home life of children. This is not a question of elaborate apparatus or a mastery of pedagogy. An understanding of child-nature, sympathy and common sense have been found by Miss Lynch and others to be the prime factors in the beginning of education at home. There are successful schools where these ideas are practiced, and many individuals are applying them. This book shows how, and its fresh outlook, sturdy sense and simple explanations will make it a blessing in many homes.

Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Roger T. Vaughan, Ph. B., M. D. Volume IV. Gynecology. Edited by Emilius C. Dudley, A. M., M. D., Professor of Gynecology, Northwestern University Medical School; Gynecologist of St. Luke's and Wesley Hospitals, Chicago, and Herbert M. Stowe, M. D., Associate in Gynecology, Northwestern University Medical School; Attending Obstetrician to Cook County Hospital. Series, 1914. Chicago: The Year Book Publishers of the series of ten volumes \$10.00.

Of course this book belongs to this series but the publishers have arranged the whole series in such a way as to enable those interested in special subjects to buy only the parts they desire.

This particular volume the reviewer has found especially interesting. It is divided into seven parts as follows:

Part I.—General Principles.

Part II.—Menstrual Disorders.

Part III.—Displacements and Injuries.

Part IV.—Infections and Allied Disorders.

Part V.—Extra-Uterine Pregnancy.

Part VI.—Tumors.

Part VII.—Sterility.

How To Cook and Why. By Elizabeth Condid, Assistant Supervisor in Household Science Pratt Institute, and Jessie A. Long, Instructor in Cookery Pratt Institute. Harper & Brothers, Publishers: New York and London, MCMXIV. Price, \$1.00 net.

This book is admirably adapted to the needs of two sets of people, those of the girl of high-school age and those of the average housekeeper. The high-school girl studying cookery under a teacher with scientific training needs a simple book to remind her of the principles she is hearing about and which she herself is practising in the school kitchen. The average housekeeper, deeply interested in the responsibility she has in preserving the health of her family, needs a book that is easy to refer to and that will give her broad, general principles without going so far into details that she finds it impractical to follow. This book that Miss Condid and Miss Long have written together meets these two needs.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on such subjects as Neurology, Paediatrics, Obstetrics, Gynaecology, Orthopaedics, Dermatology, Rhinology, etc. By leading members of the Medical profession throughout the world. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A., with the collaboration of several other doctors of the highest standing all over the country. Regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume III. Twenty-fourth Series, 1914. Philadelphia and London: J. B. Lippincott Company.

In this volume there are six subjects treated. On Diagnosis and Treatment there are six articles; on Medicine, eight; on Electrotherapeutics, three; on Surgery, six; on Child Welfare, one; and on Medical Problems, two. There are many excellent illustrations and one colored plate.

Manual of Obstetrics. By Edward P. Davis, A. M., M. D., Professor of Obstetrics in the Jefferson Medical College, Philadelphia. 12 mo. of 463 pages, 171 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$2.25 net.

This volume is a manual of obstetrics where we are supposed to give the word its modern meaning. Modern obstetrics embraces the diagnosis of pregnancy in its various stages, a knowledge of the anatomy of the birth canal in the pregnant woman, the hygiene and pathology of the mother during pregnancy, and of the fetus as well. The mechanism, physiology and treatment of labor and its complications, form an important part of obstetric science.

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Abstracts of the Leading articles of the month.

Medical Aspects of Exophthalmic Goiter.

The author has treated medically over 90 cases, about 40 being still under treatment. Most of these expects to progress gradually to recovery, as the others have done. Operative assistance will probably be required in less than 10 per cent. of the whole number treated. He employs the following remedies: Quinine neutral hydrobromide (preferred to other quinine salts because it is better tolerated); the salicylates, aspirin, and drugs of this class (also neutralizing thyroid secretion), bromides or cannabis indica, to control excessive nervousness and the physiologic action of quinine, and trional, veronal, etc., in some instances, for insomnia. Purgatives are useful in removing indican. The author recommends a combination of podophyllin, cascara sagrada, and oil of black pepper; also sodium sulphate, given with potassium bitartrate. Proteins are added to or taken from the diet, as may be indicated both by the urine and the patient's weight. The Bulgarian lactic acid bacteria are always of great value. Jones New Orleans Medical and Surgical Journal.

Toxemic Iritis.—Beaumont, in *The British Medical Journal*, mentions the frequency with which iritis is associated with arthritides, or at least with arthritic pains. It is noteworthy, too, that the arthritic and iritic symptoms are often so accurately coadjusted that exacerbations in the eye and joint frequently recur synchronously. On the other hand, practically never is acute rheumatism coincident with iritis. In the dyscrasia of syphilis and in that of gonorrhea a source of infection is clear and unmistakable. In traumatic iritis, due to a perforating wound, germs obtain direct access to the iris, and even in operating under the strictest asepsis the surgeon's path of incision may become the road of sepsis. Possibly, too, in sympathetic ophthalmitis toxins are elaborated in the exciting eye which have a specific affinity for the iris and other structures of the sympathizing eye. There is an ill-defined type of iritis arising from a dislocated lens in which there is apparently no path of entry for organisms from without. It is noteworthy that the iritis in such cases shows few signs of inflammation, although there are discoloration of the iris and posterior synechiae. Such a low form of infection is probably caused by organisms of attenuated virulence. In diabetes the marked tendency to the dermic formation of boils and carbuncles of obviously infective nature may possibly explain the source of iritis, but on the other hand they may be the coeffects with the iritis of a common infection. Iritis, although credited to malaria, is a rare complication in paludal disease, while that which sometimes follows late in cases of herpes of the fifth nerve would seem to be undoubtedly of infective origin. He has seen iritis in association with adiposis dolorosa, but as the patient suffered at the same time from dental sepsis it was probable that the latter was a factor common to both, inasmuch as adiposis dolorosa is due to an inflammation of the fibrous tissue of the panniculus adiposus. Except in sympathetic ophthalmia the iris does not appear to be readily accessible to microbic invasion following injuries of distant parts of the body. Pyorrhea alveolaris is the most frequent source of toxemic iritis, and the reasons would seem to be, first, the great prevalence of pyorrhea, and, secondly, the fact that the infection in these cases is direct into the circulation, whereas in many other forms of alimentary toxemia the toxins undergo the ordeal of the hepatic furnace.

The Therapeutic Value of the Potato.—Howard (*The London Lancet*) has been studying the therapeutic uses of the potato. He mentions two facts which stand out prominently from his results. The first is the prompt relief of pain, acute or subacute; the second is the rapid absorption of fluid in cases of synovitis where this remedy has been employed. The writer's results have been constant and thoroughly tested.

Upon investigation no alkaloid has been found in the potato, its chief ingredient being potash salts. The basis of all the pharmacological preparations is the liquid extract—*extractum solani liquidum*. The method of preparation is thus described: The raw potatoes are put into a hydraulic press and the liquid is squeezed out. One-half the weight of the tuber comes away as fluid. From this fluid the starch and nitrogenous matter is removed, leaving the juice with the salts in it. With heat it is concentrated and some glycerine added to preserve it, untill it is five times the strength of the juice, i. e., ten times the strength of the potato itself. The ointment is made the same strength as the extract, being prepared chiefly with lard. With equal parts of the extract and lin, saponis co., or two of extract and one of soap liniment, a liniment is made. The plaster is made as ordinary plaster, strength ten to one. All these preparations are now on the market in England and sold at a moderate price.

The action of the liquid extract on synovitis with effusion into the knee-joint, whether traumatic or gouty, speedily relieves pain which does not recur. Absorption of the fluid takes place in four to six days. At the end of a week the patient is up, using the knee slightly. In fourteen to sixteen days he can resume employment.

In acute cases it is applied as a fomentation or poultice, one part of extract to three or four parts of hot water on three or four layers of lint, covered with protective, then cotton wool and a bandage. This should be renewed every two, three or four hours, according to the severity of the case, until the fluid is absorbed. No splint is required, but the patient must be kept in bed. Several cases are cited.

In gout the local treatment relieves the pain more quickly than any other treatment at present used. It is applied, one part of extract to three or four parts of hot water, the same as in synovitis, until the pain and swelling are relieved. One typical and several other cases are recorded.

In lumbago, subacute rheumatism, muscular rheumatism or fibrositis and bruises considerable relief is given.

In lumbago, foment the back well with hot water, and whilst the skin is red have the ointment well rubbed on three or four times a day, the patient being in bed a day or two to give the part rest.

In the various forms of subacute, chronic, muscular rheumatism, a liniment made of two parts of ext. solani to one part lin. saponis rubbed on the part will in most cases give relief after the first or second application.

It has also been of great benefit in sprains and bruises.

He has found this method of treatment relieves pain much more quickly than lead and opium lotion.

The Curative Treatment of General Paralysis.—Stoddart (Medical Press and Circular) says, the probability of syphilis bearing an etiological relationship to general paralysis has been recognized. Patients were treated with mercury and iodide of potassium with no avail. It came to be regarded as an incurable disease. Dr. Clape Shaw had a few successes after trephining and draining the cerebro-spinal fluid, but his plan was not generally adopted. About ten years ago Dr. Ford Robertson, Edinburgh, announced the discovery of the paralyticans in the cerebro-spinal fluid and that he had secured remissions through a vaccine prepared from the bacillus.

The bacillus paralyticans was not generally accepted, but Robertson's work raised the question of the cause being due to a secondary infection of some kind superimposed upon syphilis. This notion received some support, as patients treated with urotropine for cystitis did well, and cure was even sometimes established. There are few drugs which find their way into the cerebro-spinal fluid. Potassium iodide fails to enter the cerebro-spinal fluid, but urotropine does; and beneficial results from the latter lent support to the hypothesis of a micro-organism in the nervous system.

For several years, therefore, he has given all his general paralytics ten grains of urotropine three times a day, and the result has been that no convulsive seizures ever occur, and remissions obtained in 25 per cent. of cases. But in 75 per cent. urotropine has proved a miserable failure.

"Provocative dosage"—a large dose of a drug killing a micro-organism; a small one only stimulating to further activity; the difficulty with large doses of urotro-

pine is that they are liable to cause strangury. Lately Dr. Stoddart has adopted the plan of giving twenty grains four times a day for four days, omitting the drug for four days alternately.

As remissions are liable to occur when the patient is attacked with an acute illness, Pilez hit upon the plan of injecting tuberculin to produce a febrile attack, but in cases where this is tried the patients should have tuberculosis eliminated. After a von Pirquet test is made, a ten per cent. solution of Koch's alt-tuberculin (Ta.) is prepared as follows: Tuberculin, one part; glycerine, four parts; sterilized water, five parts. One division of a Pravaz syringe—0.01 milligramme of tuberculin—is then injected. Two days later, if the reaction is not severe and the temperature not above 101 deg. F., 0.02 milligramme is given; and then, at intervals of two days, 0.03, 0.04, 0.05 milligramme, up to one-half milligramme. With this treatment Pilez obtained remissions in 26 per cent. of his cases.

Donath, Fischer and Lepine used nucleinate of soda to produce hyperleucocytosis, as follows: Sodium nucleinate, two parts; sterilized distilled water, one hundred parts. Donath recommends seven injections of this at intervals of five days. With this he obtained remissions in thirteen out of thirty-six cases.

Salvarsan has been tried by many, all having negative results. This, like mercury and iodide of potash, fail because the choroid plexuses will not allow these drugs to enter the cerebro-spinal fluid. This has been definitely proved.

Swift and Ellis have introduced the intrathecal injection of salvarsanized serum. Salvarsan is first introduced into the blood of the patient by intravenous injection; a quantity of blood is subsequently removed and the serum separated from it, and, lastly, this serum is injected into the lumbar sac of the patient. This is the most recent treatment and most in vogue at the present time. It has only been introduced in the last few months.

Half a gramme of neosalvarsan is dissolved in about 5c.c. of freshly distilled water. It is very important that the water should be freshly distilled into a sterile flask, for it has been found that the presence of dead bodies of micro-organisms in the solution causes a very severe general reaction, the temperature of the patient rising to 104 to 105 deg. F. after injection. A suitable vein is selected, and with a specially constructed syringe the solution of neosalvarsan is injected into the blood stream. From one hour to four hours later the patient

is bled and 40 c.c. of blood are withdrawn into sterile centrifuge tubes. The blood is centrifugalized in the electric centrifuge for one hour so as to separate the clot and corpuscles from the serum, and 12 c.c. of the salvarsanized serum are diluted with 18 c.c. of normal serum.

Venesection is unnecessary, as the blood can be obtained through the needle of the salvarsan syringe, that for the normal serum being obtained just before injecting the salvarsan, and the salvarsanized blood one to four hours later by the same method.

The mixed sera are now heated to 56 deg. C. for half an hour, a lumbar puncture is made and cerebro-spinal fluid is withdrawn until the pressure falls to 30 mm. This sometimes means the withdrawal of 40 c.c. or more of cerebro-spinal fluid. The mixed sera are now injected into the spinal canal and the patient placed in the Trendelenburg position so that they may trickle up to the brain by the force of gravity. This procedure is repeated about once a week until the patient has received about ten injections.

Some physicians dilute the salvarsanized serum with sterile salt solution or distilled water instead of normal serum.

The writer pins his faith to the urotropine treatment as the most satisfactory. Ten grains of urotropine three times a day ultimately induces a solution of one in 20,000 of formaline in the cerebro-spinal fluid.

Dysentery.—Sandwith (The London Lancet) states that this type of the disease is met with in all parts of the world, particularly in times of war and famine and in crowded institutions, such as lunatic asylums and prisons. Several varieties of the causative bacilli have been described, differing from each other in detail and particularly in their action upon sugars. The varieties are usually divided into two types: the Shiga-Kruse, which does not ferment mannite, and the Flexner or mannite-fermenting type. To these two types must be added the *Bacillus dysentericus* El Tor, described by Ruffer in 1909 and found then and since to be the chief cause of dysentery among pilgrims returning from Mecca to the quarantine station at El Tor on the Red Sea coast. The Shiga bacillus is the commonest cause of bacillary dysentery. The incubation period is short—from one to two days. The onset is usually sudden, but may begin with one or two days of diarrhea. Gripping pain in the colon is the first symptom, followed very shortly by motions which consist only of a lit-

tle blood and mucous. The tenesmus is so constant that the patient is hardly content to be away from the bed pan. The fever from an uncomplicated case is seldom above 101 or 102 deg. F., and does not last for more than three to eight days, while in a mild case the temperature may never be above 99 deg. The stools may vary in the twenty-four hours from twelve to fifty or many more. The tongue is slightly coated or may be clean, but there is no appetite for food. A fatal case gradually develops a rapid pulse, cardiac failure, and collapse, in spite of an apparent improvement in the temperature and in the frequency and appearance of the motions. In gangrenous or fulminating cases the symptoms are severe from the onset, the stools may resemble washings from raw meat, with large sloughs of necrosed mucous membrane, causing death as early as the third or fourth day. The group of symptoms called dysentery in tropical and subtropical parts of the British Empire is usually labeled ulcerative colitis in the United Kingdom, at least outside lunatic asylums. One is confronted by an illogical outcome, for a case diagnosed as ulcerative colitis in a London hospital ward might be relabeled if it were discovered later that the patient had lived in the tropics and that his feces contained amebae or bacilli; or, again, if he became insane and had a colitis relapse in an institution the complaint would be called "asylum dysentery." The author draws attention to the extraordinary and unexplained prevalence of bacillary dysentery among lunatics. It seems to linger in some asylums as if it were the last remnant of the dysentery which used to be so prevalent in Great Britain. Shiga says of bacillary dysentery: "Always a constant companion of war it has been more fatal to armies than powder and shot."

Frequency of Eruptions After the Use of Balsam of Copaiba.—Fischer (Deutsche Med. Wochenschrift) reports the frequency with which eruptions are observed after the use of balsam of copaiba in gonorrhea. The direct cause of this observation was the request of the Central Bureau of the Berlin Benefit Institutions for the Sick to employ balsam of copaiba in place of the more expensive preparations of the Oil of Santal. The after effects of balsam of copaiba had almost exclusively for the last thirty years. Prof. Blaschko and many other physicians therefore favored the more extensive use of balsam of copaiba. It was soon found, however, that in fully 10 per

cent. of the cases eruptions, generally with itching, appeared. Not rarely, there were also small petechiae which finally remained as brownish spots. The development of these blood extravasations shows that the process is not an altogether indifferent one for it proves that balsam of copaiba will either damage the walls of the vessels or else will induce hemolysis.

He concludes as follows:

"The question is whether these observations justify the further employment of preparations of balsam of copaiba or whether it is imperative to again resort to the oil of santal. The latter is also not free from slight after-effects, in the form of gastric disturbance and pain in the region of the kidneys. They are usually however so slight and infrequent that they need cause no alarm. According to my own experience, santal is tolerated best of all. If others confirm the very common idiosyncrasy of the skin toward balsam of copaiba it would be best to drop this preparation and again return to the preparations of the oil of santal."

The Operation of Election for the Radical Cure of Inguinal Hernia.—Newman (The Indian Medical Gazette) mentions this operation, which closely follows Bassini's, but is, he thinks, simpler and more easily performed. The doctor has had excellent results in fifty cases operated on during the last three years. An incision three and a half to four inches in length is made an inch or a little less above and parallel to the inner two-thirds of Poupart's ligament, so as to expose the whole length of the inguinal canal and its rings. The fat and subcutaneous tissue having been divided and all bleeding points secured, the aponeurosis of the external oblique is split parallel to its fibres throughout the length of the wound, including the intercolumnar fascia at the inner angle. This he prefers to do with scissors. The cord is thus exposed to view and the search for the sac begins. The wall of the supposed sac when found, should be held up at one point with a pair of forceps and nicked with a knife, making an opening to be enlarged for an inch or more with scissors to permit of the immediate exploration of the interior with the forefinger, by which it may be determined whether the true sac has been opened or not, whether the hernia is funicular or tunical, the size of the internal ring and the presence or absence of adhesions. The sac is then separated, a procedure that is easier in the funicular variety. In this variety the sac after iso-

lation is twisted into a cord at its neck, transfixed, ligatured, and the redundant portion cut off. The stump is then drawn up into the abdominal cavity by passing the ends of the ligature in turn through the internal ring and the abdominal wall and tying them externally. In the tunical variety occlusion by ligature is usually impossible and a pursestring suture must be passed around the neck and tied, or this may be varied by passing the suture where the sac is adherent, then crossing the ends and occluding the remainder of the neck by ligature. The redundant portion is then cut off and the stump drawn up. Any remains of the funicular portion must be carefully removed. The scrotal portion may be left, or removed separately. The gap in the lower abdominal wall, at the site of the inguinal canal, is closed by pulling the transversalis and internal oblique muscles down over the front of the cord and suturing them to the back of Poupart's ligament with two or three square or mattress sutures of stout silkworm gut, placed in order from the internal to the external ring and finally tied in this order. The outermost suture should obliterate the internal ring, while the innermost should close the external ring securely, without unduly constricting the spermatic vessels. The thigh should be flexed slightly as the sutures are tied. The cut margins of the external oblique aponeurosis are united by a continuous flax thread suture, the skin wound closed with a continuous suture, a dressing applied and held in place by a spica bandage.

Abdominal Opening for Appendicectomy.—Edington (British Medical Journal) says that the first incision is through the skin and superficial fascia transversely from the middle line outward to within a finger breadth of the iliac crest and at a level of the anterior superior spine. This gives good access, avoids the nerves, and lies below the lower tendinous insertion of the rectus. A transverse incision is next made in the sheath of the rectus, beginning one inch from the linea alba and extending for half an inch outward. This is prolonged to the semilunar line by means of dull pointed scissors. The rectus is next separated from the edges of the opening by blunt dissection and freed from the posterior layer of the sheath by the finger. It is then retracted toward the middles lines, and the posterior sheath, along with the peritoneum, is incised transversely. The wound is closed in layers at the end of the operation. Drainage, when needed, is brought out

through an aperture in the internal oblique and transversalis. If an enlargement of the wound is necessary this can be made in an outward direction into the transversalis and internal oblique muscles.

Chronic Pulmonary Tuberculosis in Infancy and Childhood.—Lees (*The British Medical Journal*) describes six areas of dullness over the apices of the upper and lower lobes which he regards as typical of pulmonary involvement. Dullness in these regions is equally typical and constant in infancy, childhood, and adult life, but it is only to be made out by the most painstaking and accurate percussion. Percussion should always be made with the patient in such a position as permits of full muscular relaxation; for the anterior chest the patient should be lying supine, while for the posterior he should be seated with his arms crossed and resting upon his knees. The percussion should be as light as possible, and constitutes the most certain and valuable sign of pulmonary tuberculosis in infants and children, in whom there is no sputum, and who usually show none of the ordinary symptoms of tuberculous pulmonary disease. Valuable aid is rendered by properly taken X-ray photographs, which show small areas of impaired light transmission in the regions found to be dull, as well as fine lines of infiltration radiating from the hilus of the lung. But the X-ray photograph is not delicate enough to detect changes in the lungs at the very earliest time, when careful percussion will reveal dullness in one or more of the areas in which it is typical of tuberculosis. The finding of this dullness in the presence of bronchitis, or of the pulmonary affections associated with many of the infectious diseases should be regarded as an almost positive indication of tuberculous involvement.

Chronic Tuberculosis in Childhood.—Riviere (*British Medical Journal*) says that chronic pulmonary tuberculosis in infancy or childhood is nothing more than a curiosity, but he agrees with the preceding author that the best method for its early diagnosis lies in the demonstration of the typical dull areas by exceedingly light percussion. He holds the common thoracic lesion in tuberculosis of infancy and childhood to be an involvement of the tracheobronchial lymph glands. Diagnosis of this lesion rests upon the demonstration of interscapular dullness and presence of a shadow in radiographs. Riviere's experience leads him to the con-

clusion that, irrespective of whether this glandular involvement is right or left sided, or both, the area of dullness is to be found on the right side only. This is explained by the fact that it is believed to be due, not to the presence of the enlarged glands directly, but to a deficient aeration of the lung tissue from pressure of the glands on the right pulmonary artery which leads to congestion of the lungs. The typical area of dullness extends from the first to the sixth, seventh, or even to the eighth dorsal vertebra and outward convexly from the middle line for from two to three inches. In these cases there may also occasionally be found some of the typical areas of dullness described by Lees as indicative of pulmonary involvement, but the characteristic feature, even when these are present, is total absence of changes in the respiratory sounds and of rales. The interscapular dull area, indicative of glandular involvement, shows a certain amount of variation in size in the different phases of respiration.

The Most Efficient Method of Drainage in Septic Peritonitis.—Curtis (*Proceedings of the Royal Society of Medicine*) says that the peritoneal cavity as a large lymphatic cavity, containing between the endothelial cells readily demonstrable stomata through which germs introduced into it, and the toxins they have formed, easily escape into the whole system. The more these accumulate the more readily they are forced into the system, under the increasing pressure of the accumulating effusion, whilst at the same time the virulence and toxicity of the germs and their products, brewed under such conditions of intraperitoneal growth, are enormously exalted.

Free drainage acts by affording an exit for the septic organisms, and, as a result, not only reduces the intraperitoneal pressure previously exercised in forcing the toxic material into the system, but actually lowers the exalted virulence of the germs themselves.

As to the two principles of efficient drainage for the prevention or treatment of septic peritonitis, they consist in arranging for the escape of irritating fluid (gastric or duodenal contents, etc., or actual pus) at the lowest point to which it tends to descend; and second, the routine bilateral subphrenic drainage.

In perforative peritonitis, such free fluid as is not more or less locked up between the coils of the intestine and elsewhere tends to accumulate in the pelvis, and therefore drainage through the lowest practicable point of the pelvis is what

we should aim at in respect of such accumulation. In the case of married women this ideal has long been carried out, and drainage through Douglas's pouch, after perforating the posterior fornix, has for many years been the custom. The absence of such a space in men and the undesirability of using this route in the case of unmarried girls have induced surgeons to employ another mode of drainage in such cases. There seemed, indeed, no other safe route through the lowest part of the pelvis. From these reasons the method still most commonly selected is the insertion of a wide drainage-tube, with or without a wick of gauze, down to the pelvis through a median incision just above the symphysis pubis.

The many recoveries from general peritonitis drained through the hypogastric incision show that this method, especially if a gauze wick is used, gives good results, though the fluid has to travel uphill, against the influence of gravity, a force which the capillary attraction afforded by the gauze wick, when properly inserted, largely overcomes. When once the first wick has been removed, however, it is frequently impossible to be sure that the second wick inserted has really reached the lower end, and beyond, of the tube, which being stitched in situ is not removed for cleansing (owing to the difficulty in replacing it) during the first forty-eight hours or so, by which time a track will have formed; and yet it is just during these early days that the virulence of the sepsis remains at its height, and also the retention of the pus tends to aggravate the tendency to adherence between the coils, leading to fatal paralysis of peristalsis immediately, or before long. Clearly, therefore, a method of certain and rapid evacuation is most desirable. In men and unmarried girls this principle of drainage through the lowest part of the pelvis can be carried out by perforating the anterior wall of the rectum, the method advocated by Bidwell.

As to the second principle of efficient peritoneal drainage in Bidwell's scheme—which consists in routine drainage of the right and left subphrenic regions through the loins—this is done through a vertical skin incision above each iliac crest, placed one inch behind the corresponding anterior superior spine. With one hand inside the peritoneal cavity to protect the viscera, the points of a large closed Wells forceps are pushed between the muscular fibers of the abdominal wall into the peritoneal cavity. The blades of the forceps are then opened and grasp the outer end of the wide drainage-tube, the inner of

which is provided with lateral holes. Drawing the tube out to a suitable distance, the inner end is led up on the right side, to lie between the liver and the diaphragm, and on the left side between the diaphragm and the spleen.

Drainage through a rectal tube practically ceases in three or four days, when the tube may be removed. Drainage through the loin tubes is generally a little longer, and on their removal gauze wicks are useful till the discharge ceases.

Spasm of The Cerebral Vessels.—Russell (British Medical Journal) says that cerebral angiospasm not only may occur but is rather frequent. He cites the observation that transitory hemianopsia has been associated with marked reduction in the size of the vessels in the affected portion of the retina, and that return of vision was accompanied by relaxation of the spasm. Among common conditions due to cerebral angiospasm are certain forms of migraine, transitory loss of memory, mental obscurity in which there are attacks of greater obscurity and inability to work, epileptoid attacks, vertigo, and temporary loss of ability to perform ordinary work. If the angiospasm recurs very frequently or if an attack is considerably prolonged, more or less marked cerebral softening may result.

Drugs which induce vasodilation usually relieve the symptoms at once.

Does School Work Produce Myopia.—Wilson (British Medical Journal) says that if we can answer it in the affirmative, then we might reasonably proceed to consider school clinics and the prevention of myopia. As matters stand in this country we have but little reliable information as to the relative prevalence of refractive defects. At present in our school clinics we deal mainly with necessitous children who have been found to have defective visual acuity when tested by the ordinary test types. If we are to obtain data which to estimate the prevalence of the various forms of refractive defects, then the inspection of school children will require to be done in a thorough and comprehensive manner, and from observations so obtained in succeeding generations of children we shall get information for comparison and deduction.

Does school work per se produce myopia? Does convergence and depression, with slight lateral movements of the visual axes, with the associated muscle compression, produce or aggravate

myopia? It can only do so by raising the intraocular pressure. And it comes to this: Does the muscle compression associated with convergence and depression of the visual axes raise the intraocular pressure and increase the size of the eyeball? We know that the part of the eyeball that yields is not the less-resisting part, as in buphthalmia, but the more resisting, and this fact contraindicates increased pressure acting on healthy or normal eye tunics.

The intraocular pressure varies with the general blood pressure, and the latter varies with physical exertion, or sedentary habits. The habits of the scholar, student, or clerk are sedentary. There may be in school life conditions, other than muscle compression, capable of influencing the health or development of the eyeball. Myopia is found in children who are under school age, and the myopia so discovered is usually high in degree, and this suggests that there are other cases of lesser amount that are not discovered. Moreover, myopia is sometimes found in illiterates, and therefore we have to admit that myopia does exist apart from school work. In 844 consecutive cases of myopia I find as follows:

School children, 37 per cent.

Housewives and domestic servants, 28 per cent.

Tradesmen and such like, 18 per cent.

Clerks and other near workers, 14 per cent.

These figures suggests that occupations involving much near work are not a cause of myopia. I have no figures of my own showing the increasing prevalence of myopia in the older scholars as compared with the younger, but as I have pointed out elsewhere, the near work of school years is an industry that is contemporaneous with the manifestations of heredity. In my cases there is evidence of heredity in 60 per cent. Heredity, then, is the principal factor in the etiology. From the presence of corneal opacities, keratitis is classed as the cause of myopia in 14 per cent. of the cases. Cataract is some form is present in 10 per cent of my cases. I frequently find changes in the periphery of the lens in the form of punctuate opacities or striae, in young people of 13, 14, 15, or 16 years of age. Apart from the ordinary fundus changes there is evidence that myopia is to a considerable extent either a disease or a condition produced by disease.

It is striking fact that when an eyeball is enlarged beyond what we consider the most useful size, that is, emmetropia,

then we frequently find evidence of disease, past or present. In my cases I find 65 per cent are females; thus women are more liable to short sight than men.

Women in many cases spend a large part of their time in the house, or work within a confined space. These people may be said to do a certain amount of near work, but I think it is necessary to draw a distinction between the convergence and depression of the visual axes in ordinary near work, and the near work and other conditions associated with working in a confined space. A prisoner liberated from long confinement sees distant objects badly, but this is temporary, wears off in some weeks, and is probably accommodative in nature. There may be something in the female sex that dispose to myopia, or it may be that adaptation to near objects is evolved. I submit that there is not much evidence that school work per se is a cause of myopia. I think it will be time to consider the prevention of myopia when we are agreed as to the cause. Meanwhile we should correct it, encourage outdoor exercise, and give all the usual instructions.

Strychnin-Tuberculin Treatment of Tuberculosis.—Whelan (British Medical Journal, London) gives strychnine injections to all kinds of tuberculous patients, including cases in which tuberculin injections are contraindicated, with the best results. The doctor gives strychnine in acute and chronic cases, in the pyrexial and the apyrexial, in the early stages and in the most advanced, and with invariably good results. It always improves the appetite and general condition. Patients who have a loathing for food soon regain their appetites under its influence. Strychnine, Whelan states, will frequently do away with the painful necessity of adopting gastric lavage and over alimentation. But the drug must be given by intramuscular or subcutaneous injection, preferably the former. Administered by the mouth, it has not the same effects, and in large doses will cause tormina and diarrhea, with possibly disastrous results in advanced cases. These effects are never produced by the injections. Hemorrhages from the lungs, Whelan says, are found to be no contraindication for the strychnine injections. He has given them in such cases with remarkably good effects when the circulation had been quieted by morphine. The following is the solution he invariably uses: R Liquor strychnine hydrochlorid 100 minims; sterile normal saline

solution made with camphor water, add to make 400 minims; Signa: 1 in 400 strychnine solution. Dose, 18 to 25 minims.

Treatment of Ringworm.—Foley (The London Lancet) recommends the following treatment for ringworm as both simple and efficient: The part is first washed with a strong solution of sodium bicarbonate, then swabbed with a piece of lint that has been moistened with a solution of one part of ether in two parts of alcohol, to remove fats. The area is then dried, a 2.5 per cent. tincture of iodine painted on, and immediately after, an ethyl chloride spray directed over the part. He finds it best to work with a pair of ethyl chloride tubes in each hand, as a larger area can thus be covered in a given time. The deeper the disease process, the longer the spray must be applied. The spraying is continued until the skin has become china white. Twenty-four to forty-eight hours later the patch of ringworm becomes quiescent. Minute infected spots are then looked for and similarly treated. In a few days to a week these spots also disappear. This method has been successful in curing in one week ringworm of months' standing, and he states that it has never failed him.

In ringworm of the scalp three or four applications of the iodine and spray are required, but on the face or smooth surfaces a single one is sufficient.

The Treatment of Bronchial Asthma With Tuberculin.—Frankfurter (Wien. klin. Woch.) has observed 8 cases of bronchial asthma in which he also suspected the presence of pulmonary tuberculosis. Some authors have conclusively demonstrated that a patient does not suffer simultaneously from asthma and pulmonary tuberculosis, while others have with equal assurance found a close relation between these conditions. All the author's patients exhibited suspicious signs of pulmonary tuberculosis, such as dullness and diminution of respiration over the apices; and in one case rales were heard over the right apex. Treatment suitable for consumptives was accordingly prescribed, but rest combined with other hygienic, dietetic measures was futile. Tuberculin (Beraneck) was then cautiously prescribed in the first 6 cases with excellent results. These can hardly be attributed to the psychic effects of the subcutaneous injections, for improvement was seldom marked till several had been given, in one case eleven and in another nine injections. The fact that

on two occasions relapses occurred after appreciable intervals suggests the presence of a potent, if not a permanently active, factor. A detailed account of the 6 cases shows that the recovery effected by the first patient was maintained two years later; that the second patient relapsed after an interval of two years; that the third patient improved much after nine injections, but was unable to continue the treatment for private reasons; that the fourth patient's condition was "satisfactory" a long time after the completion of the treatment; that the fifth patient had no serious attack after the treatment was started, her cough and dyspnoea becoming much less troublesome; that the sixth patient was unable to continue the treatment after the second injection for various reasons. It is possible that peribronchial, tuberculous foci may have been responsible for the asthma in these cases, and that the tuberculin affected them beneficially. If this be so a large dose of tuberculin should cause a focal reaction, and thereby precipitate an attack of asthma. The test of his theory the author has not carried out, and he leaves it to others to investigate the effect of rapidly increasing doses of tuberculin, as used for diagnostic purposes in tuberculosis, on cases of asthma suspected of pulmonary tuberculosis. He also suggests the injection of a series of control cases of asthma with normal saline solution.

Dysentery.—Sandwith says the large intestine of man is liable to infection by two distinct entamebae. One of these *Entameba coli* is a harmless organism, living merely on the intestinal contents and never penetrating the mucous membrane. The second entameba, the *Entameba dysenteriae* (*E. histolytica*, Schaudinn, or *E. tetragena*, Viereck), is a pathogenic organism which not only lives among the intestinal contents, but actually invades the tissues of the large intestine, leading to all the troubles and symptoms associated with amebic dysentery. The primary lesion of amebic dysentery is apparently an exudation into the submucous coat of the large intestine, first seen to the naked eye as red, slightly raised spots, not much larger than the head of a pin. When these congested spots grow in area a yellow central point appears, which is the earliest stage of ulceration, due to local necrosis of the mucous membrane. Amebiasis is a convenient name for specific lesions in various parts of the body—intestine, liver, brain, skin near anus, etc.—and amebic

colitis has been proposed as a preferable term to amebic dysentery, because it includes the sporadic mild cases, even when accompanied by constipation, in addition to those characterized by frequent evacuations and the constant presence of tenesmus, blood, and mucous. The existence of tenesmus, often the symptom forcing the patient to seek medical aid, means that there are lesions in the proximity of the sphincter. If the lesions on the contrary, either in true dysentery or in bilharzial infection, are limited to the colon, there will be no tenesmus. The onset of amebic dysentery is usually sudden and always begins with diarrhea. Fever is not a marked feature, and when present is never high. The pain is intestinal, and is specially great before and during an evacuation. A higher degree of leucocytosis, tenderness over the colon, and thickening of the large intestine are all in favor of the amebic type. The cause of death in amebic colitis is generally perforation and consequent peritonitis, succeeding ulceration of the colon or appendix. Sandwith agrees with other writers on tropical diseases that the most frequent complication of amebic dysentery is abscess of the liver.

Observations on the Pathology and Etiology of Duodenal Ulcer.—Wilkie (Edinburgh Medical Journal). This article is based upon the study of 41 cases found post-mortem. In only six was the condition diagnosed.

1. Duodenal ulcer is a malady of frequent occurrence and one which often passes unrecognized.

2. Although as a rule diagnosed, a chronic duodenal ulcer may occasionally exist and give rise to none of the characteristic symptoms, the first evidence of such a "silent" ulcer being sometimes its perforation.

3. "Silent" duodenal ulcers are met with most frequently in the subjects of arteriosclerosis, and are found for the most part on the posterior wall of the duodenum.

4. Some toxic or irritative factor, usually within the abdomen and most frequently associated with the colon or appendix, is found in a large proportion of cases of chronic duodenal ulcer.

5. Probably many acute duodenal ulcers are primarily follicular ulcers from the breaking down of inflamed lymph follicles.

6. Whatever be the primary cause of a gastric or duodenal ulcer, spasm of the muscular coats of the viscus is an important factor in determining its chronicity.

7. The situation of the opposing ulcers on the anterior and posterior walls of the duodenum on the boundary zone of the areas supplied by the anterior and posterior branches of the supraduodenal artery suggests that a common vascular deficiency rather than a contact infection accounts for the peculiar tendency to chronicity and recurrence.

8. This vascular deficiency may be due to arteriosclerosis, but probably it is usually due to spasm of the muscular coats of the duodenum induced by a slight local anaemia consequent to strain on the supraduodenal vessels, this muscular spasm being favored by the increased vagotonus and the irritable condition of the autonomic nervous system which exists in such cases.

9. The sex incidence of duodenal ulcer is to be explained on anatomical grounds. The relatively high pylorus and short fixed duodenum of the male allows of its vascular supporting ligament, the hepatoduodenal ligament, being exposed to strain, which in the female, with her relatively low pylorus and lax duodenum, is borne by the left border of the gastrohepatic omentum and lesser curvature of the stomach.

The Composition and Derivatives of Urinary Dextrin.—Cammidge and Howard (The London Lancet) report the discovery of a process by which the dextrin in a urine can be estimated even in the presence of sugars if free pentoses have been excluded by preliminary tests. This process has enabled the authors to investigate the occurrence of this body in diabetes and other pathological conditions and also to watch the variations that occur in different circumstances. The process is not sufficiently delicate to detect the trace of dextrin present in normal urines, and it is found that the urine of healthy individuals has an iodine coefficient of nought. When carbohydrate metabolism is being imperfectly carried out a high iodine coefficient is obtained. hydrate metabolism is such that sugar appears in the urine, a previously high iodine coefficient usually falls, to rise again when the sugar disappears. In many cases of persistent glycosuria, too, this movement of the iodine coefficient and the sugar excretion in opposite directions has been observed by a fall in the other. In severe cases of diabetes, where more sugar is being excreted in the urine than would be accounted for by the carbohydrate taken as such in the food, particularly when a fatal termination is close at hand, the course of the iodine coefficient

cient of the urine and sugar excreted follow each other. These observations suggest that the urinary dextrin is probably a derivative or antecedent of glycogen, intermediate between that substance and dextrose. In the former case the body still possesses the power of breaking down glycogen to a polysaccharide of low molecular weight, but this, instead of being converted into dextrose, which in its turn would give rise to CO_2 and H_2O , suffers irregular oxidation. It is also possible that the urinary dextrin may result from an incapacity on the part of the tissue, however, the interference with carbohydrates to form glycogen from dextrose, the process stopping short at the intermediate dextrin stage. In support of this view there is the fact that in mild and intermittent cases of glycosuria the iodine coefficient of the urine vanishes on a carbohydrate-free diet to reappear again when dextrose is added to the food in insufficient amount to bring about a return of the glycosuria, suggesting that when the glycogen stores of the body have been reduced by the exclusion of carbohydrate from the diet the tissues recover to a certain extent their powers of building dextrose into a more complex molecule, but cannot carry all of it beyond the dextrin stage. It has also been found in cases of hepatic disease in which dextrose can be utilized but in which levulose and lactose give rise to alimentary glycosuria, that the ingestion of dextrose is not associated with an increase in the iodine coefficient of the urine. When, however, either of the other sugars is given in sufficient amount the iodine coefficient rises, suggesting that dextrose can be converted into glycogen, but that part of the levulose and lactose can be carried only to the dextrin stage, some being excreted in an even less completely metabolized condition.

Cause and cure of cancer.—Lazarus-Barlow (British Medical Journal) May 9 1914, suggest that radium in the tissues is the cause of cancer. This view is supported by several observations of the author. It is well known that minute quantities of radium are capable of materially stimulating many forms of living cell. Radium is very widely distributed in nature, in amounts which are capable of causing the multiplication of cells. Bacteria suspended in a fluid containing radium or its salts attract it to themselves. Cancer is conceded to occur most frequently in parts of the body subjected to chronic irritation and inflammation, and it may be accepted that these parts

also harbor bacteria in greater amounts than normal tissues. Such being the case, radium in the body would be associated with its accumulation by bacteria in such sites. The alpha rays are known to cause disappearance of Altmann's granules from cells and the author states that such granules are always absent from true cancer cells. Radium may be demonstrated in normal tissues, but always in smaller amounts than in cancerous tissues. Gallstones, which are not associated with carcinoma of the bladder, do not contain radium, whereas those found in such association contain relatively large amounts. Exposure to the X-ray is a frequent cause of cancer. The opposite of these propositions is also true; large amounts of radium, instead of tending to accelerate growth and multiplication of cells, are directly destructive of cells. This is particularly true of cancerous cells. The action of radium on cells is selective, not all types of cells being equally vulnerable. Its curative action on cancer does not depend solely on destruction of cells by direct action of the radiations; it has been shown in animal experiments that destruction of a portion of the cells by radium gives rise to an active immunity. This leads to the further regression of the growth, but without immunity cure cannot be expected. If destruction of the cancer cells has been too extensive, no immunity is produced, and a recurrence may be expected. In spite of his belief in the curative powers of radium, Lazarus-Barlow advises strongly against its use in any case in which operative measures are possible.

Note on a Simple Method for Diminishing Chloroform and Ether Sickness.—Renton in (The British Medical Journal) observed that cases of gastroenterostomy treated in the Fowler position had very little postanesthetic sickness, Renton has for the last six years raised the upper end of the patient's bed on blocks twelve inches high in all cases after chloroform or ether anesthesia. This he continues for twenty-four or thirty-six hours.

This plan has been followed by a great diminution in the amount of sickness. By the old method in which patients were kept lying in bed with the head very low, the amount of sickness was very great in many cases. The staff nurses at the Western Infirmary and nurses in private confirm the statement that the improvement since the upper ends of beds were systematically elevated has been very great, and in consequences

the suffering to patients and the labor to nurses are very much less.

The reason that this method is satisfactory is purely mechanical, as it is more difficult to be sick in an elevated position than with the head low. Certain patients are, of course, very sensitive to the influence of chloroform and ether, but even when on previous occasions patients report that they suffered for days with sickness, when in the elevated position the sickness very soon passed off.

Schlatter's Disease.—Corben in *The London Practitioner*, records a case of traumatic separation of the tubercle of the tibia, known as "Schlatter's disease," or "Rugby knee." This usually occurs between the ages of thirteen and sixteen years and is more common in boys. The case reported was that of a girl of only nine years. It resulted from sudden bending of the knee due to catching the heel when going down stairs, and the effort to prevent falling backward. The only symptom was recurrent slight lameness and the diagnosis was made by radiography. Recovery followed bandaging and voluntary immobilization of the knee. The injury may occur from direct or indirect violence; but with very few exceptions the cause is the latter, in which sudden and violent action of the quadriceps extensor, such as would occur in recovering lost balance or great efforts in jumping, causes partial avulsion of the tibial tubercle. There is sudden pain in the front of the knee, and loss of power, generally only temporary. Occasionally, there is swelling and effusion into the joint, which may be so severe that the condition is mistaken for fractured patella. In many cases the pain is not severe, the child takes little notice of the injury, and it may be only after some weeks, or even months, have elapsed that medical advice is sought. The pain may be intermittent, disappearing completely at times. It is chiefly felt on movement, but occasionally there is some aching at night. The joint may or may not be swollen; tenderness on pressure over the affected tubercle is practically constant. Usually the tubercle is definitely enlarged, but comparison of the two sides may not assist, for not infrequently both knees are affected in the same person. As a rule, the displacement of the tubercle is very slight.

Ectopia of the Bladder.—Edmunds, in *The London Practitioner*, records a case

of this condition in a girl of twelve which he treated by transplantation into the intestine. He says that plastic operations designed merely to reconstruct the bladder are unsatisfactory, since at the very best they only afford partial relief; and that transplantation of the ureters is preferable. Transplantation of the base of the bladder is better than the separate transplantation of the ureters because it is easier to perform, and on theoretical grounds is less likely to lead to an ascending infection. This is done better by an intra- than by an extraperitoneal route, inasmuch as it is possible to perform the operation with less interference with the vascular supply of the bladder stump, and to utilize a mobile portion of the bowel. As most of these cases die of pelvic cellulitis, the wound should be left freely open. A hernia may be developed, but this can be dealt with later by an aseptic operation, or may be controlled efficiently with an apparatus.

Deafness After Neosalvarsan Injections—Meneau (*Gaz. hebdom. sc. med. Bord.*) gives an interesting review of reported cases of deafness following neosalvarsan injections. In 1912, J. de Azna reported to the Spanish Society of Dermatology the case of a man of 26 who suffered from acute syphilis and tuberculosis, and who became suddenly deaf on both sides after the third injection of neosalvarsan. The fourth and fifth injection produced some amelioration of the condition and it was concluded that the deafness was a neuro-syphilitic phenomenon, which was cured by a continuation of the treatment. In the same year Sommer Greco laid before the Argentine Dermatological Society the case of a man of 25, who suffered from secondary syphilis and became completely deaf after the fourth injection. Gray reported to the Royal Society of Medicine the case of a secondary syphilitic of 22 who received 0.9 gm. of neosalvarsan, and six weeks afterwards developed deafness on the left side, with facial paralysis on the same side. This was put down to syphilitic disease of the internal ear, with specific localised meningitis or arterial thrombosis. There was no neuritis and no nuclear affection of the seventh nerves. The hearing improved later. It was remarked in the discussion following Gray's paper that such deafness had never been noticed before the days of salvarsan.

Scrofula.—McNeil (Edin. Med. Jour.) argues that scrofula is something more than a variety of tuberculous infection. It depends upon an abnormal constitution in which the body shows a hypersensitive reaction to various infective agents, including tubercle bacilli in a majority of cases. This abnormal constitution is that usually known as status lymphaticus. There is some evidence which suggests that the thyroid gland is involved in the constitutional condition which underlies scrofula. This evidence may be arranged under the following headings: 1. The thyroid gland shows marked histological change in certain cases of scrofula examined postmortem. 2. The following points seem to furnish clinical evidence of thyroid involvement. Deficient thyroid secretion may explain the stunted growth in marked scrofula. The hyperplasia of the skin in the seborrhea of the scalp, the overgrowth of the hair seen in the eyebrows, eyelashes, and pronounced lanugo on the general skin surface rather point to excess of some element of the glandular secretion. 3. The therapeutic value of iodine-containing substances in scrofula has been long known and thoroughly tested, especially iodide of potassium and iodide of iron. It has been proved that these substances, together with iodine itself and preparations of the thyroid gland, have a direct action upon the thyroid, and, where it is in a condition of hyperplasia, restore it to a colloid condition. It is therefore arguable that their efficacy in scrofula may be due to their restorative action upon a morbidly functioning thyroid.

A Simple Test for Sugar.—Dimmock (British Med. Jour.) Ten c.c. of the urine is put into a 200 c.c. flask, which is filled up with water. A solution of potassium carbonate (1 in 4) is made by dissolving 2 ounces of K CO in distilled water to 8 ounces.

Twenty c.c. of the diluted urine is mixed with 10 c.c. of the potash solution in a small flask, and the mixture boiled carefully for three minutes. When cool the liquid is made up to 50 or 100 c.c. with distilled water. A control solution of pure glucose, 1 gm. in 200 c.c. is then taken, and 20 c.c. of this boiled in the same way with 10 c.c. of the potash solution, and made up to the same bulk when cool.

The two solutions are then compared as to colour by being placed in glass tubes which are held over white paper at an angle of 45 degree. The control

solution represents 0.5 per cent. of glucose: by the removal of sufficient of this to bring both specimens to the same tint, the percentage of glucose in the urine may be approximately estimated.

Treatment of Quinsy.—Henke (Presse medicale) has used a multivalent antistreptococcic serum in circumtonsillar abscess, with gratifying results. The diagnosis of this condition having been made, he seeks the exact seat of the inflammation by inspection and exploration with a probe, then injects at this point, with a syringe and under light pressure, 30 or 45 minims of serum. The needle should be introduced to a depth of 1.5 or two cm., more superficial injections being ineffectual. In the case of abscesses apparently starting from the supratonsillar fossa the author uses a curved hypodermic needle which is inserted in this area.

This treatment was employed in thirty-five cases. In some, in which fluctuation could already be detected, no result was obtained except that spontaneous evacuation seemed to take place sooner and more frequently. Where the part was still in the stage of infiltration, however, positive effects were noted. In twenty instances the condition was completely aborted, swelling being distinctly less on the day after the injection and wholly disappearing by the third day. Moreover, in the first few minutes after the injection the distressing pain, which had rendered the patient unable to swallow, left off entirely, a feeling of distention in the neck alone remaining. The aborting effect cannot, however, be said to occur constantly; in a few instances the abscess ran the usual course and resort to the knife was necessary.

Acute Pancreatitis.—Rollman (Deutsche Zeitschrift für Chirurgie) concludes that this condition occurs mostly in fat individuals and without any reference to sex or age. As to causation, cholelithiasis is often operative: at times defects in diet with excessive use of alcohol. Hemorrhage, necrosis, inflammation, and often pus formation are associated in the same case. The diagnosis of acute pancreatitis is usually very difficult, because in many cases there are no pathognomonic symptoms. Such functional tests as the Cammidge reaction, investigation for ferment in the urine and stools and in the duodenal fluid are complicated and uncertain. Simple exploratory laparotomy affords a much more rapid and certain means of diagnosis and one which

most surgeons would adopt. In some cases it will result fatally from heart weakness within a day. These severe cases can be accounted for only on the ground of an overwhelming toxemia. Suppuration gives rise to a milder and more subacute course. It seems probable that some mild cases recover spontaneously. A favorable course is usually characterized by abscess and subsequent formation of a pseudocyst.

The treatment is surgical only. The principal indication is to give exit as quickly as possible to the toxic exudate and the necrotic pancreatic tissue. On account of the usual collapsed state of the patient, this must be done quickly and carefully, and be confined to simply laying free the pancreas. In one of the author's cases this was done under local anesthesia. The best anatomic approach to the pancreas is between the stomach and the colon by separating the gastrocolic ligament. As a result of marked brawny swelling of the tissues and atony of the intestines the exposure of the pancreas offers many difficulties. Also hemorrhage from the gland may render further operative progress impossible, thus offering the most unpleasant complication of the operation.

Autopsy findings on fatal cases have shown the author that simple drainage of the abdominal cavity and exposure of the pancreas do not offer the possibility of cure. It is evident that the capsule of the gland must be incised in order to afford escape for the highly toxic and life-threatening exudate within. It is also essential that operation should be done early. Four out of eight of the author's cases of hemorrhagic pancreatitis by operation.

The suppurative cases offer a much more favorable prognosis. A puncture can be made without any grave consideration and thus a diagnosis be assured. For the retroperitoneal abscess the flank incision, as advised by Bardenheuer, is the operation of choice. The cyst cases were operated upon by the classical method of Gussenbauer, and in every instance with good results. A sequel of this method is the resulting fistula, which may last for months or years and which subjects the patient to constant danger of infection. But, on the other hand, extirpation of the cyst is technically very difficult, and can be done, as a rule, only when it has a well-defined wall, a condition which does not exist in case of the pseudocyst. Closure of the fistula can, however, usually be accomplished by

means of the Wohlgemuth diet and the administration of large amounts of sodium bicarbonate. As after-results of almost complete removal of the pancreas the author found in one case severe emaciation, and in the other diabetes in a marked form.

A Case of Ectopia Vesicae in Which the Ureters Were Grafted Successfully.—Simpson (British Medical Journal)

mentions a case of a girl aged eight years, successfully treated. Under a general anesthetic he dissected up the posterior bladder wall from the peritoneum above and triangular ligament below. A catheeter was inserted into each ureter, which was cleared for about two inches; the redundant portion of the bladder was removed except just around the ureters. Simpson next proceeded to divide some fibrous tissue in the position of the hymen admitting the finger into the vagina, and then divided the triangular ligament, permitting the lower end of the ureters to be turned back into the vagina in close proximity to the anterior rectal wall. With a finger in the rectum an opening was made through the posterior vaginal and interior rectal walls, and through this the catheters and ureters were placed; the free edges of the recto-vaginal incision were sutured to the sides of the ureters, the triangular ligament, perineum, and abdominal wounds were respectively drawn together with catgut. Urine was collected in a receptacle for seven days from the two catheters which protruded from the anus; they were then withdrawn, and the patient made an uninterrupted recovery.

She is now able to run about, attend school, and retain her urine in the rectum for several hours at a time.

Two Cases of Schlatter's Sprain.—Connell, in The London Practitioner, says Schlatter's sprain is meant "a partial or complete separation of the anterior tubercle of the tibia, with or without rupture of some of the fibres of the quadriceps extensor ligament or even of the joint capsule. It is caused usually by excessive muscular exertion or strain, but apparently may be produced in its slighter degrees by direct injury. The anterior tibial tubercle may ossify by extension from the epiphysis of the head of the tibia, or it may have a separate ossification center. It usually unites about the 16th year."

The two cases reported show that the severity of the injury may vary within

wide limits, and that therefore no rule can be laid down as to the duration of treatment. Both occurred in boys 17 years old, and both were caused while exercising at the vaulting horse. The first was sent to the hospital with a diagnosis of fracture of the patella, caused by a fall at the vaulting horse that morning. "The X-ray, however, showed complete separation of the anterior tubercle, which was drawn up and rotated forwards and upwards. At the operation the next day the joint capsule was found extensively torn in several directions, while the joint was full of clot. The tubercle was found at the upper end of the joint, turned inside out. It was replaced and kept in position by two tacks, two others being used to keep the patellar ligament fixed down. The capsule was united and skin flap sewn over all." Later the two patellar ligament tacks were removed, full movements of the joint were obtained and the patient was discharged cured.

In the second case the boy was about to make a great effort to jump the horse but his courage failed and making a half jump he struck his knee against an iron bar on the side of the horse. There was slight swelling following the injury, and posterior displacements. In anterior displacements, the leg is flexed, abducted and everted. In posterior displacements, the leg is flexed, adducted and inverted. (2) Position of the great trochanter. Backward in anterior dislocations; forward in posterior dislocations. (3) Position of the head of the femur. By the pubes and easily felt in anterior dislocations; in the buttock in posterior dislocations. (4) As a rule it is impossible to decide if the dislocation is accompanied or unaccompanied by a fracture of the pelvis, (e. g. acetabulum) or of the neck of the femur unless a skiagraph is taken—therefore a skiagraph should always be taken." For clinical work the author considers that the above four features are sufficient; and suggests "that the majority of the other details had better be dismissed from the text-books, where they only obscure the salient features in the description of the injury. These features are characteristic of dislocations of the hip when the ilio-trochanteric (Y-shaped) ligament remains unruptured. Should this ligament be torn, the position of the leg is sufficiently grotesque for the diagnosis of dislocation of the hip to be easy and obvious."

He found that according to the statistics of the cases treated during the past twenty-five years at St. Thomas' Hospi-

tal, London, the relative frequency of posterior to anterior dislocations is about seven to one. Males were more frequently affected than females, the figures being twenty-seven to five.

The directions for treatment correspond in simplicity with that of the author's classification of the dislocations. "The first line of treatment to be pursued, wherever possible, is to give an anaesthetic, obtaining an unconscious patient with relaxed muscles, and reduce the dislocation by manipulations. It need be no worry to remember these manipulations if dislocations of the hip are classified into anterior and posterior dislocations, as suggested in this paper. The rule is to begin by doing the movements of the typical position of the leg; and then do their opposites. Thus for anterior dislocations, flex, abduct and evert the leg; then adduct, invert, and extend; and for posterior dislocations, flex, adduct, and invert the leg, then abduct, evert, and extend. Soon after the injury the reduction of an uncomplicated dislocation is generally very easy, the dislocated head of the femur remaining in the neighborhood of the rent in the inferior part of the capsule of the joint. The more time is allowed to elapse after the injury, the more does the femoral head become dragged upwards by the muscles; the dislocation, more easily overlooked at first, becoming more obvious and easily diagnosable. The longer the time allowed to elapse since the injury, the less efficacious is flexing of the hip in bringing down the head of the femur. In consequence, if reduction is not easily accomplished by the above manipulations, it is necessary to place the anaesthetized patient on the floor, and, assistants holding the pelvis, to perform the manipulations again, strong extension on the leg being maintained all the time. If by such means reduction of the dislocation cannot be accomplished, and this is likely to be a rare event, an open operation will be necessary, as the position of the leg (e. g., flexed, adducted and inverted) and its inability to support weight forbids the patient being left with the dislocated hip. Whether the head of the femur has slipped over or under the tendon of the obturator internus muscle in no way influences the diagnosis or treatment of the injury. Its consideration is therefore of no practical value. It is unusual to find dislocations of the hip complicated by nerve symptoms. The anterior crural nerve practically always escapes. The obturator nerve is very rarely injured in anterior dislocations. But in

most frequent of dislocations of the hip, posterior, the head of the femur may press on the sciatic nerve, causing such symptoms as numbness and tingling on the dorsum of the foot."

Auricular Flutter in Rheumatic Carditis.—Sutherland (Proc. Roy. Soc. Med.) has recently met with two cases of acute rheumatic carditis in which there was apparently an abnormal rhythm of the auricles, and which was recognized on taking a venous tracing in the neck. The auricular rate was greatly accelerated, while the ventricle did not share in this acceleration. In the cases referred to, the auricular and ventricular rates were perfectly regular. Taking into account the rapidity and the regularity of both auricular and ventricular contractions, the writer is inclined to trace the slower ventricular rate not to any interference with the conductivity of the junctional tissues (heartblock), but to an inability on the part of the ventricle to respond to each auricular stimulus owing to the extreme rapidity of the auricular contractions. In one of his cases the auricular rate was 280 and the ventricular 140. Three days later they were equal, 105 per minute. In the second case the auricular rate was 390 and the ventricular 130, while the tracing also showed the pulsus alternans. The presence of auricular flutter is often lateral and unsuspected. He suggests that attention be paid to the following possible indications of the presence of this abnormal form of rhythm: (1) Attacks of cardiac asthma (great dyspnea) occurring suddenly and without accompanying variations in the cardiac condition. (2) A triple or galloping or cantering rhythm heard on auscultation. (3) Pericarditis without effusion and with great respiratory distress. (4) Dyspnea, cyanosis, and enlargement of the liver out of proportion to the physical signs of disease in the heart. (5) The presence of the pulsus alternans. Further investigations will be required to determine whether in cases of acute carditis a disordered rhythm of this nature is often present. If it is found one would be more hopeful of the treatment, for a disordered rhythm will respond to treatment by means of digitalis much better than will a ventricle weakened by acute inflammation or toxemia. If we can control the rhythm we shall place the patient in a much better position for weathering the attack.

Miscellaneous.

The Hard Lot of the First-Born.

Since the days of Esau and Jacob, if not earlier, the younger son has not uncommonly felt some degree of envy for his elder, and as he thought, more fortunate brother. For the eldest there has been the easy lot, the soft place; for the younger the hardship, and the struggle with the world. Professor Karl Pearson, however, comes now to show us that the first-born is truly the unfortunate one of the family, for on him, by virtue of his very precedence, falls an undue share of whatever infirmity or defect may be inherent in the family. He is the heir of the family ills, as well as gods. In a recent lecture, Professor Pearson points out that the limited families of today render the condition of the first-born of special importance to the community. There is, it is shown by statistics, a double proportion of still-births among first-births—40 per 1,000, as against 20 per 1,000 for second births. Measurements of new-born children showed that first-born were both the lightest and shortest at birth. Riffel, in Germany, found an undue preponderance of tuberculosis among eldest children, and Dr. Heron found the eldest child more often insane than other members of the family. Sir Arthur Mitchell in 1855 showed the same point as regards idiocy, and Dr. Goring recently demonstrated an excess of criminality among first-born. Such a defect as albinism is said also chiefly to affect the eldest. Truly, those of us who used to think we were unfortunate in being younger sons must now congratulate ourselves.—Medical Press and Circular.

Noma and Its Infective Basis.

Montefusco reports two cases of noma in young children, secondary to typhoid fever and diphtheria respectively. He states that many different microorganisms have been isolated from cases of noma, including staphylococci streptococci, leptothrix, and streptothrix. As regards the treatment of noma, although many different methods, including medical and surgical measures, have been tried, all of these have been ineffective. The author believes that noma belongs to the group of diseases caused by the fusiform bacilli and spirilla, and that a true specific should be found in salvarsan.—Giornale Internazionale delle Scienze Mediche.

Serum Treatment of Vomiting of Pregnancy.

Spies has essayed this method of treatment with great success in one case of severe vomiting of pregnancy. Le Lorier in 1911 was the first to report the happy effects following the use of horse serum in the incoercible vomiting of pregnancy. In the same year Freud had recommended the use of horse serum in the treatment of the dermatoses, and Mayer had demonstrated the advantage of the use of blood serum obtained from a pregnant woman in the treatment of persistent vomiting in another pregnant woman. Spies injected into his patient two doses of 10 c.c. each of horse serum, at an interval of three days. The vomiting was fully controlled after the second injection.—La Clinique.

Congenital Heart Disease; Probably Pulmonary Stenosis With Incomplete Ventricular Septum.

W. Essex Wynter reports the case of a man aged 26 who suffered from pains in both elbows and knees at the end of September, 1913, this being the only occasion on which he could recall anything of the nature of a rheumatic attack. On account of the loud cardiac murmur he was kept in bed for several weeks, and finally sent to the hospital. The apex beat was just within the nipple line, and pulsation, with dullness on percussion, extended one inch to the right of the sternum. A loud systolic murmur could be heard over the precordia, the point of maximum intensity being in the fourth space near the sternum. It was so loud that it could be heard for some distance radiating from this point, but was best conducted toward the left clavicle in the course of the pulmonary artery. It was inaudible in the carotids and posteriorly. The second sounds were distinct, but not increased, and there was no diastolic murmur. The pulse was normal in character, neither small nor collapsing, and regular. Blood-pressure, 170 mm. of mercury. There was no enlargement of the liver, no edema, nor any cyanosis, except during rare attacks of cardiac disturbance, and there during rare attacks of cardiac disturbance, and there was no clubbing of the digits. The patient had always suffered from shortness of breath on exertion; was never able to play games, and could not perform any arduous work. Blood count: Red cells, 6,512,000; white cells, 6,400; hemoglobin, 100 per cent.; index, .08. The X-ray screen disclosed an enlargement of the right ventricle and a limited bulging of the conus arteriosus to the left.—Royal Society of Medicine.

The Phenol-Serum Treatment of Pyogenic Processes.

Geiger cites the pioneer labors along this line of A. Lorey and B. Kustner. His material consisted of three cases of inflammation and abscess formation of the parametrium, one case of peritoneal abscess, one case of abscess of the abdominal wall, and one case of infected superficial wound. The technique of the treatment was as follows: Three hundred cubic centimeters of serum obtained from one liter of fresh horse's blood was diluted ten times with physiological salt solution and then admixed with phenol to the extent of .5 per cent. of the latter. The phenol-serum mixture was applied locally in the different cases, abscess cavities after evacuation being filled with the serum, or packed with tampons saturated with the latter. The results were invariably a rapid demarcation of the necrotic tissues and a prompt cleaning of the infected region, such changes as have not been observed by the author following as quickly any other method of treatment in similar cases. The explanation of the happy result of this method is a biochemical one. The albuminous substances in the serum in loose combination with the phenol, by virtue of the greater dissolving action on the lipoids thus exerted by this combination inhibits the development of the infecting bacteria, while at the same time no deleterious influence is exerted upon the tissues of the wound or infected region.—Beitrag zur Klinik der Infektionskrankheiten und zur Immunitätsforschung.

Syrup of Ipecac has long been a popular ingredient of cough syrups and many physicians prescribe it regularly in various combinations. It acts as an expectorant and emetic due to the action of the alkaloid cephaeline.

Syrup of Cephaeline, Lilly, is just as effective as Syrup of Ipecac and furthermore it is more reliable, of constant strength and acts more rapidly besides being much less expensive. The dose of Syrup of Cephaeline, Lilly, is the same as that of Syrup of Ipecac, hence it can be prescribed in the same amounts. Many physicians are already writing Syrup of Cephaeline, Lilly, q. s., instead of Syrup of Ipecac on prescriptions.

The Value of Avocations.

Chisholm notes that specialization, while impoverishing the individual, has enriched the profession. There are many diversions which enable men who are engrossed in their professional work to counteract its narrowing influences and at the same time to provide a needed relaxation. Collateral and subordinate pursuits provided an enlarged scope, open up whole spheres of personal culture, and widen the horizon of life. The specialist may, without prejudice to his art, emulate the example of Prospero in laying down at times his conjurer's wand and taking off his magician's mantle, while he devotes a period of his time to his greater personal needs and looks abroad over the world with opened eyes.—"Recreations of a Physician."

Front Wheel Brakes.

Buist states that front wheel brakes prove a saving of tires in relation to the actual amount of braking work done. At the recent Grand Prix race on the Lyons circuit it was noted that the cars that had front wheel brakes would rush up to the corners with the accelerator pedal full down for anything from fifty to seventy yards after those with brakes working on the back wheels only had applied them to those wheels. Therefore the total amount of braking effort on the cars with four wheel brakes was, of course, vastly in excess of those with two, because the machines were slowed in about half the distance. The demonstration of the use of front wheel brakes was remarkable. It should be appreciated that the moment braking is applied to the front wheels the result is to throw weight forward on to these wheels, thereby increasing their power of adhesion to the road surface, and accordingly preventing the wheels locking and skidding. It is skidding that destroys tires and reduces braking effort to its least possible value. A natural physical law assists those who desire to employ the principle of brakes on all four wheels. One result of the race will be to give a big impetus to the employment of front wheel brakes for touring cars. But the medical man must be warned that it is one thing to want to have brakes on the front wheels and quite another so to scheme them that they shall prove a blessing instead of a bane.—British Medical Journal.

Pathologic Changes of the Thyroid in Disease.

The object of the author's paper is to point out those diseases and toxemias

that do and those that do not produce an alteration in the thyroid, to describe the pathologic changes, to compare them with those seen in goiter, and to note when these changes are associated with signs of thyroid excess. The work is based on some 700 thyroids of man and guinea-pigs collected from post-mortem examinations.

The first change the thyroid undergoes as the result of acute toxemia is an alteration in the colloid material. It loses its staining capacity, becomes granular and vacuolated, and finally disappears. During this change the gland is congested, with perhaps intervesicular hemorrhage. The walls of the empty vesicles become plicated, the short or fat epithelial cells lining the vesicles become high cubical, and finally columnar, and greatly increase in number. The plication of the walls and the cell increase go on until the vesicles, as such, are indistinguishable; during the transition the appearance is given of villous processes growing from the walls of the vesicles. When the hyperplasia is complete, the gland is hypertrophied, but its store of secretion is exhausted. The distinction between the acute and the complete hyperplasia is that in the acute the intervesicular hemorrhage is the most marked feature; the cell and vesicular changes have not progressed as far as that seen in the complete. The length of time that the gland takes to undergo a complete hyperplasia varies with the toxemia and its intensity; the whole change may take place in twenty-four hours. So certain is this hyperplasia that the thyroids taken from any one of these acute infections can be arranged in the order of the duration of the disease as it corresponds to the degree of hyperplasia, allowance being made for the very acute infections which can be noted by the extreme degree of intervesicular extravasation.

acute toxemia thus causes a cycle of thyroid changes. First there is an acute hyperplasia in which the gland becomes hypertrophied and exhausted; when the toxin is overcome the gland involutes back to normal, but the effect of the toxemia is evident by the diminution of thyroid tissue and the intervesicular fibrosis. In the less acute toxemia the cell hyperplasia is more marked.

There are three characteristic stages in chronic hyperplasia: (1) When the vesicles are of equal size, the colloid being partially absorbed and coarsely granular, and the cells are proliferated; (2) when the vesicles are of unequal size and packed with colloid, with cell hyperplasia be-

tween them, and (3) when the gland is cirrhotic, with deficiency of thyroid tissue.—Farrant, in *The British Medical Journal*.

Hypodermic Injections of Hexamethylentetramine in the Treatment of Typhoid Fever.

Baumel states that this method of treatment was first tried in 1913 by Triboulet and Levy who administered doses varying from 1 to 6 grams per day. The solutions used were sterile and were of a strength of 0.40 gram per cubic centimeter. The results were apparently quite satisfactory in twelve cases. The author employed the same method of treatment in eleven cases of typhoid fever, of which two were severe from the outset, in one case of infection with the *Bacillus paratyphosus B*, and in two cases of Malta fever. The study of these cases showed that hexamethylentetramine has no pronounced effect upon the symptoms of the above diseases, nor does it prevent complications. The treatment is apparently of no value in cases of typhoid cholecystitis. The injections are painful. Small doses of 0.80 gram are no less efficacious than large doses of 4 grams.—*Bulletin General de Therapeutique*.

Charcoal in the Treatment of Membranous Enterocolitis.

Rodiet reports excellent results following the treatment of this usually intractable condition by means of large doses of poplar-wood charcoal. From two to four tablespoonfuls of the latter are given daily, mixed with water and administered after the midday and evening meals. The efficacy of this remedy is said to be due to its power to absorb gases from the stomach and intestine, to its antiseptic effect, and to its action in stimulating the contractility of the stomach.—*Journal de Medecine de Paris*.

Hysterical Brachial Monoplegia Following Electrical Shock.

Stewart reports the case of a patient who was treated for this condition for two and a half months by various forms of electricity and numerous psychical and sensory stimuli, but without success. On the contrary, the total flaccid paralysis of the left upper limb persisted and the anesthesia advanced proximally on the trunk so as to include the outer part of the pectoral region in front and of the scapular region behind. Suggestive treatment by attempted hypnosis was assiduously carried out for a number of weeks. No improvement having resulted after

two and a half months of hospital treatment, it was decided before discharging the patient to try the effect of administering a general anesthetic in the hope of loosening the hysterical obsession during the stage of delirium preceeding general anesthesia. Accordingly the patient was placed on a couch with the healthy right arm fixed to his trunk by means of a bandage. Ether and nitrous oxide were then administered, freely mixed with air. Within a few moments the patient began to make purposive movements with the "paralyzed" left arm and these soon amounted to violent fighting movements, in which he endeavored to tear away the anesthesia mask from his face. While the patient was in this excited condition numerous suggestions were made to him that he should move his paralyzed arm in various directions, these suggestions being accompanied by various painful stimuli—e.g. twisting the ear, pressing the supraorbital notch, etc. During this stage it was also suggested that his unaffected right arm should become temporarily analgesic to pin-pricks, and this duly occurred. It was then suggested to him that all his sensory and motor symptoms should disappear. On recovery from the effects of the anesthetic patient had lost his previous anesthesia and was able to move both upper limbs in the normal fashion. He has since remained well. The paralysis of the left upper limb has lasted over eleven months from the time of the original electric shock.—*Proceedings of the Royal Society of Medicine*.

Multiple Idiopathic Pigment Sarcoma Treated by X-Rays.

Sequeira reports the case of a male patient suffering from Kaposi's so-called multiple idiopathic pigment sarcoma, to show the remarkable improvement under X-ray treatment. The case was an early one, characterized chiefly by chronic purplish infiltration of the feet and ankles, and to a less degree of the wrists and backs of the hands. There were a few small nodules upon the generally infiltrated areas. The X-ray treatment was begun in August and was repeated at somewhat irregular intervals. In all, each part affected received about 50 H units, the applications being made through a screen of aluminum 0.2 mm. thick. There had been no reaction. The condition of the infected areas was now completely changed, the skin was of normal consistency, and the purplish tint had gone. Beyond some brownish staining of the parts there was no evidence of the disease.

—Proceedings of the Royal Society of Medicine.

Sanders Eucalyptol in Pulmonary Affections.

In all bronchial troubles it is essential that whenever eucalytus is used it should be free from irritant effects, and Sander's preparation is prepared specially with this end in view. To obtain the best results from its use a few distinctive rules have to be observed. It should not be given internally in acute bronchitis, for the expectation is diminished by it. In the early stage of acute bronchitis the greatest benefit will accrue from a foment to the chest on which 20 to 30 drops of Sander's Eucalyptol are sprinkled. The Eucalyptol is inhaled together with the steam. In the subacute broncho-pneumonias of children, 30 drops of Sander's Eucalyptol should be added to a tablespoonful of hot olive oil and the whole chest thoroughly rubbed. The friction induces the child to fill the collapsed lung-tissue and to inhale the Eucalyptol.

Its internal administration should be reserved for the chronic bronchites with profuse expectoration. It should then be given in 5 drop doses either in a tablespoonful of water, or, when *ol. morrhuae* is indicated, it can be added in the proportion of 5 drops to a drachm of cod liver oil, the taste of which it disguises very effectively. Whenever the discharge is purulent or foetid (bronchiectasis and foetid bronchitis), or when an antispasmodic and antiseptic effect is desired, as in emphysema and asthma the antiseptic inhalation below will give great relief.

In all tuberculous cases, Sander's Eucalyptol should not only be given internally with cod liver oil, but the following inhalation, especially when used continuously, will change the clinical picture often very quickly and decisively. *R. Acidi Carbolici*, 1 dr.; *Tr. Iodi*; Sander's Eucalyptol, 2 dr.; *Spir. Chloroform*, q.s. 1 oz.; inhale 15 drops frequently from a Robinson's inhaler.

Sander's Eucalyptol, unlike other eucalyptus products, is non-irritating. It was introduced to the profession in 1875, and has the endorsement of men like Prof. Dr. Hazard, the late Lord Lister, Prof. D. Mosler, and other eminent physicians of the U.S. and abroad, who have used it in the various affections for which it is indicated, and it has, as Prof. Dr. Mosler states: "up till now always rendered me the most excellent services."

Multiple Polypi of the Colon.—Back (Proceedings of the Royal Society of

Medicine) mentions a case of an actress twenty-four years old, who after a history of gradual onset of symptoms—sense of weight and loaded feeling in rectum, tenesmus, and occasional slight bleeding from rectum—was found to be suffering from multiple polypi of the rectum. The section of a tumor showed carcinoma. Abdominoperineal excision was performed. The adenomata extended well up into the transverse colon and bulged from the colon when it was opened. The adenoma rapidly disappeared and could no longer be felt after three weeks, leaving an apparently normal mucous membrane. The patient since then has been apparently well and has returned to the stage.

Watson reports a somewhat similar case occurring in the person of a police sergeant aged forty-one. After a colonic section followed by an end-to-end union there was recurrence of hemorrhage into the bowel; alter intestinal obstruction. Operation showed there had been recurrence just above the line of anastomosis and that the carcinomatous growth occurred secondarily in the liver.

Norbury also reports the case of a man thirty-two years old, who passed blood with his motions for eight or nine years. The colon was studded with small polypi, chiefly sessile. On section the polypi could be felt to extend as high as the descending colon. Because of prolapse a ventral fixation to the abdominal wall was performed, and the bowels were irrigated through an appendicostomy opening.

Dr. Mummery in commenting on these cases expressed a doubt as to whether local excision for carcinoma was any use in such cases. In the vast majority of cases other primary growths appeared in the parts of the colon not removed. The doctor had had two cases in his own experience in which this had happened, and he knew of others. He believed the only satisfactory treatment for these cases was complete excision of the entire colon after an ileorectostomy. Cases in which the polypi disappeared spontaneously were of great interest. The doctor refers to one case of multiple polypi in a child suffering from worms; the growth disappeared after appropriate treatment directed against the parasite. Almost all the recorded cases of multiple polypi of the colon had eventually become malignant, and this was a factor to be reckoned with in treating these cases.

Dr. Daniel regards polypi as a mani-

festation of infection, malignant degeneration being due to the more persistent of the more virulent action of the infecting organisms which caused the polyp, or to the increased trauma, which necessarily accentuated by the passage of the feces over the protruding polyp. Since warts can disappear spontaneously it is obvious that polyps also can. Hence the formation of the colostomy and the removal of the catarrh, always associated with carcinoma of the bowel, explained the disappearance of the polypi.

What is Lumbago?—Its Prevention and Treatment.—Sandringham (Austrian Medical Journal) says that the chief measure, other than rest in bed, is the application of dry heat in the form of hotwater bags (with or without a cover), hot bran, hot salt, hot sand, hot bottles. These are very soothing and much appreciated by the patient.

Dry cupping—i.e., small piece of wool saturated in spirit and lighted; then rapidly place the small port-wine size glass over the affected area. Several cups can be applied twice or thrice for half-an-hour. Thermocautery has been used with marked relief. Blisters are sometimes useful, but they prolong the agony.

If electricity can be obtained in the patient's home one or two electric-light bulbs could be placed six or eight inches from the painful area. To concentrate the heat, asbestos, tin, or woollen material will increase the hyperemia. The skin should be protected by vaselin or lanolin. Powerful incandescent light acts with great success, but is only available in a hospital. Similarly experiments have been made in France with paraffin wax baths at a high temperature.

Electric-light baking apparatus, high-frequency currents, and mechanical vibration sometimes give good results; better if combined with massage and a woollen binder.

Acupuncture shows good effect, especially in neurasthenic patients; occasionally morphine injections are imperative. Also ionization has been advocated. Whatever form of electric treatment or bath is ordered, the relief will only be temporary and cannot be sustained unless supplemented by dry heat and rest. Whether the stasis and inflammatory hyperplasia are relieved by capillary dilatation and a better circulation promoted remains to be proved.

The following observation may be of interest, especially from a sufferer for

several years and one who spent weeks in bed both at home and in hospital. The last two years have been marked by freedom from attacks owing to certain regime and preventive methods.

(a) Produce hyperemia by dry heat, using hot-water bags in preference to formentations and poultices; "ironing" the back over a layer of brown paper is a useful adjunct. Rest in bed will shorten the duration of an attack, supplementing this treatment by one or two large water bags semifilled with boiling water and supplied as near to the skin as possible. If it is a slight attack and the patient is unable to lie by, a hot-water bag could be fixed and applied locally (the patient concealing this method by an overcoat or by the coat).

(b) Hot soda baths—duration five to twenty minutes—after which a blanket sweat with "whisky toddy" or "gin punch" should be given.

(c) Massage with liniments should not be applied until pain and tenderness have been under control for a day or so. This is true also of electrical treatment of all kinds—i.e., high-frequency and static currents.

(d) Severe pain and limited movements call for morphine injection only in selected cases.

(e) Internal treatment can be carried out concurrently with local measures. It can be pursued upon antirheumatic or gouty and eliminatory principles. The salicylic series with alkalies in large hourly doses has been unsuccessfully tried. To the mind of Sandringham, drugs are a placebo after personal experience of heroic and mild dosages. They often do harm; all drugs having failed him to relieve pain as a specific or to cut short the duration of attack. Sedatives only are prescribed like phenacetine, caffeine, antipyrin, pulv. doveri, aspirin, and veronal for sleep.

(f) Local applications—menthol in olive oil 25-per-cent, analgesic liniment or balm, linimentum olei gaultheriae—are most effective superadded to dry heat. The following is a most useful prescription: Camphor, menthol, chloral hydrate, aa 90 grs.; oil gaultheria, 3 drachms; lard, 1 ounce.

(g) Dietetics often do harm, and gastric troubles and neurasthenia with wasting may result. Liberal and nitrogenous foods have not been found to aggravate this painful discomfort, neither have spirits nor malted beverages.

After the patient is able to be out of bed a suitable binder of adhesive plaster

over lint or wool should be worn to give support and comfort. The best method is the Jaeger belt, placed over the inner vest, and to be always worn in the daytime.

To sum up, lumbago is an affection which is of doubtful pathology, but it is a distinct clinical entity. It seems to be caused by cold which may reduce the resistance of the affected part; chilling (after overheating) seems to favor it in certain susceptible adults.

In its acute phases heat, locally applied, is the best treatment with rest, and dry heat is superior to moist. Also a liberal diet should be given.

In a patient who has once suffered the most important thing is prophylaxis, and the best prophylactic is some such belt as that indicated.

Paris Defenses and German Guns.

It was Germany's immense siege guns that spoiled all earlier calculations regarding the defense of Antwerp. It had not previously been regarded as practicable to transport for field use artillery of such enormous size and weight as these 42 centimeter guns, which throw great projectiles about sixteen inches in diameter. It is reported that the Krupp works at Essen, in which nearly fifty thousand mechanics are working day and night upon armaments and munitions, are fabricating guns of even larger size than those that were so effective in reducing the forts of Antwerp. Although the newspapers have explained, there may be some readers who have overlooked the fact that these immense guns, which weigh perhaps thirty tons apiece, are made and transported in several sections, which are of course adjusted and bolted together when the gun is mounted upon a solid concrete foundation and brought into action. It is reported that the German mechanics have been providing a supply of heavy artillery, with a view to reducing the defenses of Paris as easily as they shattered those of Antwerp. It would not be necessary to invest Paris on all sides, and it might be forced to capitulate, as in the case of Antwerp, if fortifications were broken down at one point or another.—From "The Progress of the World," in the American Review of Reviews for November.

Treatment of Disease of the Thyroid.

The treatment of disturbances resulting from excessive or perverted thyroid functioning forms a debatable ground, the opinions of internists, surgeons, and roentgenologists differing widely. The reason for these conflicting views is that

the primary cause and the differential clinical course of the various forms of hypertrophied intoxication are regarded with too little discrimination, no attempt being made to differentiate them beyond distinguishing between pronounced exophthalmic goiter and its rudimentary forms. The distinction between the nervous and the genuine thyrotoxicosis is very important. In particular the thyroid neuroses, Stern's "basedowoid," must be strictly distinguished from the other groups. Operative treatment in these cases is illogical from the theoretical standpoint and disastrous from the practical. Chvostek declares that in these cases, as well as in mild cases of true exophthalmic goiter in which there is a nervous predisposition, operative measures are not only useless, but may be directly harmful, as severe nervous after-effects are not unusual. On the other hand, in the genuine form of exophthalmic goiter, operative treatment is the most rational and radical of all measures, as also in iodine Basedow rebellious to prolonged internal treatment. Next in importance is repose for the patients, who should be gotten out of their ordinary environment. A trip to an altitude of about 3600 feet is often very favorable, starting first at 1500 feet. The patient should be well nourished, preferably with a carbohydrate-fat mixed diet. Galvanic stimulation of the neck is often useful; the anode being on the sternum and the cathode behind the angle of the jaw, a current of 1 or 2 milliamperes should be slowly turned on for from one to three minutes and then slowly turned off. Or, the current may be sent through the thyroid. Mild hydrotherapeutic procedures may be useful adjuvants. Drugs are not needed, although phosphorus, arsenic, quinine, and bromides have been recommended. The adhesions that develop after radiotherapy interfere with operative treatment later.—Bauer, in The Medizinische Klinik.

Synthesis.

The trend of scientific research is largely tending toward alchemy. It is true that we are not directly out for the elusive trinity, the philosopher's stone, elixir vitae and the alkahest; but we are again synthetic. To early minds it seemed more wonderful to create than to destroy. Scientifically, Bacon was the first of the iconoclasts, and after him there was a deluge of disrupted matter. Analysis was endemic, and men saw nothing but the marvels of simplicity. Today we

have experimentally smashed almost all our surroundings, and are trying to put them together in new ways. There are drugs galore, whose artificial nomenclature is no less ingenious than their composition, hile their alleged qualities are more wonderful than all. We have synthetic sugar and synthetic rubber; we have heard of synthetic milk, made chiefly from a Chinese bean (soy), which is an ever present dread. There was one who tried to manufacture eggs. The yolk, the white and the shell he could do "in his head." He stuck at the skin. He finally perfected it, but the cost of the necessary rubber ruined his enterprise commercially. Synthetic life is no new idea. Men have striven to imitate the masterpiece of the Ancient of Days ith soap and oily films. Their ameba moved and were still. A story was lately told to the Societe Internationale de la Tuberculose. Dr. Alexandre Marey has made, "aseptically by the action of the tuberculin of the Pasteur Institute upon sterilised glycerophosphat of soda," bodies identically alike in form and capacity for stain with Koch's bacillus. What is more marvellous, they grow on potato and the guinea pig just as do their prototypes. If this thing is true, we must turn over our ideas. They are probably not true; but nowadays it is more popular to believe than to doubt. "Go round." That is the real way to knowledge. Swift used to call the man who made two blades of grass grow where one did before a benefactor of the human race. We wonder if the same remark is applicable to the multipliers of tubercle bacilli.—The Medical Press, London.

Smell as a Cause of Disease.

The lay idea that smells—from a defective drain or even a dead cow—are responsible for the occurrence of infectious diseases is still firmly rooted. One not infrequently hears it stated that the onset of symptoms of diphtheria or typhoid fever was almost synchronous with the inhalation of such noxious effluvia. The Commissioner of Public Health for Queensland deals succinctly in his last annual report wit hwhat he terms the "stink doctrine of disease-causation." It seems that "the most extensive stink that has ever been recorded in history occurred in London in 1857 and 1858. The sewerage of some three millions of people festered and fermented in the Thames for two successive hot summers. The river was one vast open cloaca of filth lying in the midst of London. The steamers lost

their traffic, the work of the law courts was broken up, and parliamentary committee rooms were only tenable after being fitted with deodorant-soaked screens. The Press teemed with letters of complaint and suggestion. The hot weather passed away, the returns of sickness and mortality were made up, and it was found that not only was the general death rate below the average, but that the leading peculiarity in the season was a remarkable diminution in the prevalence of fever, diarrhea, and the other forms of disease commonly ascribed to putrid emanations. This is not an argument in favor of stinks as tonics or protective agencies, but an historical record of the results accruing in respect of health from the most powerful and fully developed stink that is ever known to have afflicted a large population for a long while. Old ideas die hard, and it seems to be a far cry before public recognition can be gained for the fact that the primary function of a Public Health Department is not to clear choked drains, to abolish stinks, or to remove dead animals from backyards."—The Australasian Medical Gazette.

A Notable Work on Biological Therapeutics.

A book of uncommon interest and value to physicians has just been issued from the press of Parke, Davis & Co. It is a new "Manual of Biological Therapeutics," receipts of a copy of which is hereby acknowledged by the editor of this Journal. The book is handsomely printed in large, clear type, on heavy enameled paper, and bound in cloth. It contains 174 pages of text, upwards of thirty full-page plates in color, and a number of half-tone illustrations in black and white, together with a comprehensive index. As its title suggests, it is a concise and practical treatise on biological therapeutics, and so replete with useful information that no practitioner should miss the opportunity to secure a copy, especially in view of the fact that the publishers announce that the entire edition is to be distributed gratuitously to members of the medical profession, on individual application.

Something of the scope and value of the work may be inferred from this incomplete list of the subjects treated: Biology; Bacteria; Immunity; The Preparation and Uses of Sera; Antidiphtheric Serum; Concentrated Diphtheria Antitoxin; Allergic Reactions; Antitetanic Serum and Globulins; Antigonococic Serum; Antimeningitic Serum; Antistrep-tococcic Serum; Bacterial Vaccines or Bacterins; The Opsonic Index and de-

scription of method of taking it; When Serums should be used and when Bacterial Vaccines are to be preferred; The various Bacterins and their Indications; Smallpox Vaccine; Pasteur Antirabic Vaccine; The Diagnosis of Typhoid Fever; The Agglutination Test Without a Microscope; The Agglutometer; Ehrlich's Diazo-Reaction in Typhoid Fever; Gonococcus Antigen; The Wassermann Reaction; Colcy's Mixture; Coagulose or Hemostatic Ferment; Bacillus Lactis Bulgaricus; Phylacogens, their Preparation and Mode of Use; Mixed Infection Phylacogen; Pneumonia Phylacogen; Gonorrhea Phylacogen; Erysipelas Phylacogen; Rheumatism Phylacogen; Typhoid Phylacogen; Tuberculins in Diagnosis and Treatment; Organotherapy; Thyroidectin and Thyroprotein; Thyroid and Thymus Glands; Adrenalin and Pituitrin; Corpora Lutea; The Biological Farm and the Research Laboratory.

To our physician friends we suggest the propriety of writing at once for a copy of this "Manual of Biological Therapeutics," addressing the request to Parke, Davis & Co., at their home office in Detroit, Michigan. It will not be amiss to mention this Journal in writing.

Rachitis Treated With Cod Liver Oil, Calcium and Phosphorus.

Schloss (Deutsch. med. Woch.) sums up this subject as follows: In three naturally nourished rachitic children it was found that the action of phosphorus and cod-liver oil had an unfavorable action on the calcium and phosphorus metabolism. The author's observations are not sufficient in number to prove his own thesis. Schabad has shown that lime exerts a favorable influence, especially when given with cod-liver oil, upon the calcium metabolism. In order to obtain ideal results, phosphorized cod-liver oil must be combined with some organic phosphate of lime—an albuminous substance containing the salt. Albumin phosphorus seems especially desirable for bone defects. However, an inorganic salt, calcium phosphate, should develop a good activity in naturally nourished children. Whether this result could be obtained without cod-liver oil, however, is a question. Schloss believes that phosphorized cod-liver oil or cod-liver oil alone should be replaced by a combination of the oil with a lime-phosphorus preparation.—Universal Record.

Treatment of Acute, Eczema.

Samberger (Dermatologische Wochenschrift) mentions a new method of treatment, limited however to the wet form and

no other clinical form of the disease, which is as follows: So long as wetting continues Samberger orders poultices, either antiphlogistic when the inflammatory symptoms are very prominent, or keratoplastic (1 per cent. watery sol. of resorcin and 0.5-1 per cent. silver nitrate) when the inflammatory symptoms are slighter. Gauze or cotton impregnated with the solution used is placed upon the diseased surface, covered with cambric and held in place by a bandage. In three or four hours the application is changed and this must be done several times during the day. If the wetting ceases the diseased part is dusted for one or two days with an indifferent powder. If the part remains dry it is also treated with an indifferent paste and the powder is continued.

Samberger uses the silver solution only in exceptional cases because of the blackening it produces on everything it comes in contact with. If the part is examined on the second or the third day it is found to be macerated and the epidermis is white as if soaked in water.

Inasmuch as the irritable skin does not tolerate washing with cold water Samberger subsequently began to employ hot solutions with much more striking results even in those cases where the inflammatory symptoms were most severe. This improved method of application not only brought about a quicker attainment of the desired result than the previous resorcin compresses, but washing with the hot solutions was much more convenient and cleaner. With this method the itching which tends to be so intense in these cases, rapidly disappears.

The bathing or washing should be done two or three times a day especially where the wetting is very profuse. The resorcin solution must, however, be hot, as hot as the patient can tolerate it without scalding. The procedure should last about five or ten minutes. The part is then dried and covered with a dry dressing. It is so arranged that air has access to the part. After two or three days, if the part is dry Unna's paste is applied. Samberger does not use Lassar's paste.

Arsenic and Iodine in Arteriosclerosis.

In an article on the prognosis of arteriosclerotic cardiac conditions, Klemperer, of Berlin, also refers to the therapeutic possibilities. In his opinion, rest and a careful mode of life are the fundamentals of all treatment. Luckily the majority of arteriosclerotic patients are in good circumstances and therefore able to follow the physician's advice in this respect.

Klemperer strongly believes in the io-

dides and prescribes them regularly. He also advocates the use of arsenic, because he has often observed the value of this drug in the headache, dizziness and sensations of fear, associated with arterial disease as well as for controlling subjective cardiac symptoms. Arsenic is also of value objectively, as it frequently reduces blood pressure. He believes that arsenic and the iodides, administered alternately, are an aid in improving the prognosis of arteriosclerotic heart affections.—*Therapie der Gegenwart*.

The Legume Treatment in Diabetes.

Labbe has found that a leguminous diet is of particular service in the treatment of diabetic patients in whom malnutrition is marked. The following daily regimen is ordered: dried legumes, 300 grams; butter, 150 grams; 5 or 6 eggs; 5 or 6 aleuronat rolls or 30 grams of gluten bread. The legumes (peas, beans, or lentils) should be well baked in order that they may be easily digested. It is not necessary that they should be served in the form of a puree unless the patient's digestion is very weak. The above ration suffices for three or four meals. It should be repeated for at least three days, and even for a week with good results. In simple case of diabetes without nitrogenous denutrition, this method of treatment occasionally causes a rapid disappearance of the glycosuria. It is of particular service in the case of hearty eaters. In diabetes with moderate denutrition the legume treatment leads to a diminution or an arrest of acidosis. In the cases of denutrition with acidosis the treatment is of particular value. The treatment is carried out usually for three or four days and is repeated every ten or fifteen days. The effect of the legume diet is similar to that produced by the oatmeal cure, but is superior in these respects: the diet is better borne, is more satisfying to the appetite, maintains the patient's strength to a greater degree, diminishes to a great extent the glycosuria, and combats more effectively the nitrogenous waste.—*Revue de Médecine*.

Sudden Death During Bathing.

After discussing the numerous explanations of the cause of sudden death during bathing, Guttier (*Med. Klin.*) considers none of them entirely convincing. On the basis of physiological experiments on the vestibule, he argues that caloric stimulation of the middle ear is often the cause of a fatal reflex. Persons with large perforations of the tympanum are subject to giddiness, vomiting, nystagmus, and general collapse when a small quantity of cold water is poured into the ear. Even when the tympanum is intact the same reaction oc-

curs if the water is less than 10 c. c. As many persons have a more or less large perforation of the tympanum, and many others suffer from calcification of the tympanum and other pathological conditions which facilitate a rupture of the tympanum, the chances of a bather getting water into the middle ear are considerable. While he is suffering from giddiness, vomiting, and collapse he may be drowned. The obvious precaution is the insertion of cotton-wool into the ears before bathing, particularly if the water is cold. O. Muck discusses the same hypothesis. He records the case of a young healthy person who was bathing in a swimming bath close to the rope dividing the section for non-swimmers from that for swimmers. After performing a somersault in the water he was seized with such violent giddiness that he had to seize the rope in order not to fall. Next day he consulted the author for severe tinnitus. Complete absence of the tympanum was now found, and the lining of the tympanic cavity was seen to be thin, and pale. The author points out that Danziger reported a similar case in 1899. Not only may a perforation of the tympanum prove fatal during bathing, but a quiescent suppuration of the middle ear may flare up again when water enters the middle ear. When the cause of a death during bathing is being investigated the necropsy should include an examination of the tympanum, if possible, by an aural surgeon. It is unnecessary to remove the petrous portion of the temporal bone; indeed, its excision might rupture the tympanum and thus vitiate the investigation. As the epidermis becomes detached and the cavities of the body lose their normal appearance after the body has been in the water for some time, the investigation of the ear should be confined to those cases in which the body has not been long in the water.—*British Medical Journal*.

X-Ray Treatment in Exophthalmic Goiter.

The writer reports treating 16 cases of exophthalmic goiter with the X-rays. All left improved, some apparently cured. He suggests that exophthalmic goiter, the symptoms of which are apparently due to excess of thyroid secretion, is itself due to sympathetic irritation, and that Addison's disease is also due to this cause, pointing out certain features which he thinks are common to both these diseases—pigmentation, irritable heart, digestive disturbances, etc. Cases of diagnosed Addison's disease which recover are due to the improvement in the sympathetic system. Early treatment of all cases showing symptoms of exophthalmic goiter with the X-rays is recommended. Fenwick (*Australasian Medical Journal*).



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Treatment of Diabetes With Gout.

Von Noorden calls attention to the fact that diabetes is often complicated with gout and that if the diet indicated in both conditions is observed, there would be little left for the patients to eat. Fortunately, the combination of severe diabetes with severe gout is not common. Thus in the last twenty years, the author has seen less than a dozen cases. The rule is that the gout runs a mild, intermittent course and slowly disappears, while the diabetes is slowly progressive. A more serious feature, however, is the more pronounced tendency to complications, particularly affections of the heart, vessels, kidneys and eyes, and neuralgia and neuritis. The latter two are especially common and may be due both to the excess of uric acid and the excess of sugar in the blood and hence are especially severe if both these substances are present in the blood in undue amounts. As a rule, the gouty condition will be treated first with hot baths, hot packs, massage, electricity, hot air, light baths and other physical procedures; with salicylates, phenacetin and atophan and with a milk, egg, vegetable and fruit diet. Most physicians also instruct the patients to avoid dark meat and partake only of white meat. The author believes that it is much better to direct the treatment of these cases toward the diabetes, but at the same time to reduce the meat and to forbid altogether the alcohol and the internal organs, such as liver, sweetbreads, kidney and spleen. The glycosuria will rapidly disappear though the hyperglycemia will often persist much longer than in simple cases of diabetes. The neuralgia and neuritis can be checked in this way much more rapidly than by the other treatment. There is little danger that the gouty symptoms will increase or that nephritis, if present, will become worse. Later, the tolerance of the patient toward carbohydrates will be better and a less restricted diet will serve to keep the sugar out of the urine. More attention can then be paid to the gout. Thus, every two months, a purin-free is to be followed for about two weeks and during this time, the amount of carbohydrates is increased. When both affections are very severe an antidiabetic diet is alternated with an antigout diet every two weeks. It is also important to remember that these patients do not tolerate the colchicum preparations.—Therap. Monatshefte.

Treatment of Pemphigus With Contents of The Bullae.

For the last two years the treatment of pemphigus by subcutaneous injections of the contents of the bullae themselves—a sort

of auto-sero-therapy—has been undertaken by T. Holobut and J. T. Lenartowicz, of Lemberg. In a preliminary communication upon the subject, the authors point out that there is no specific germ of pemphigus, although several different micro-organisms have been found in the blisters. In this treatment the hypothetical germ is injected in an unknown quantity, so that it is not vaccine-therapy in the strictest sense. The bullae are pierced at their upper part by sterile glass cannulae with fine extremities. The serous contents only are collected into sterile testtubes. If the contents of some bullae appear to be turbid, or otherwise objectionable, they are emptied into separate tubes. The tubes are then placed in a water-bath for half an hour at a temperature of 56 to 58deg. C, after which plate-cultures are taken in order to see if any strepto—or staphylococci are present. If, after 24 to 48 hours no colonies are found the contents of the tubes are mixed with 0.5 per cent. carbolic acid and placed in sterilized flask ready for use. Two cases of chronic pemphigus vulgaris were treated in this manner, i. e. by subcutaneous injections of 1 Cc. of the contents of their own bullae. The patients were boys of eight and twelve years, respectively. Both had had previous intravenous injections of quinine, after the method of Leszczynski. After six injections in the first case of the same dose, at varying intervals of three to seven days, the blisters began to diminish in size and number until they ceased to appear. No harmful influence, generally, or locally, was observed. In the second case twelve injections of the patient's own blister-contents in doses of 1.2 to Cc., spread over a period of the treatment the evening temperature remained normal and the boy gained in weight. Even in a fortnight the improvement in his general condition was very noticeable.—Urologic and Cutaneous Review.

Mesothorium in Treatment of Cancer.

Zweifel's microscopic findings in cancers after mesothorium treatment confirm the destructive action on cancer cells; the normal cells showed comparatively little change under the exposures. His experience warns of the necessity for extreme care in protecting the abdomen outside of the focus; some stray rays in a few cases evidently did some injury as the patients complained of severe pains and tenesmus and one passed some scraps of bowel tissue in the stools. He recalls two of his older cases of uterine cancer in which the cancer was apparently cured by an extensive local streptococcus process, but returned three

or four years later. He thinks that the action of mesothorium must be explained in much the same way; the reaction to the mesothorium rays is like a burn, and in the course of this physical process the cancer cells become destroyed and are reabsorbed. It is possible, further, that the reabsorbed cells have a therapeutic action like the autolysates. He urges all who apply radiotherapy to publish an additional report on their cases after a year has elapsed.—Zentrab, fur Gynak.

Gasoline as a Therapeutic Agent.

Stephens (Dublin Journal of Medical Science) mentions many uses to which ordinary gasoline may be put. In pediculosis capitis it is the remedy par excellence, not only terminating the life of the parasite, but having a solvent action on the larva as well. In alopecia areata it has proved useful; in ringworm and in scabies it succeeds where other remedies have failed. Its great penetrating powers, together with its solvent properties, make it useful in many skin affections. Burns of all kinds and especially those produced by spluttering of hot metal, such as steel, copper, or from spelter works, are greatly benefited by the early application of gasoline. At the author's suggestion, several of the works in his district keep a quantity of gasoline ready at hand which is used as a spray, blown onto or into the wounds, which are then covered with a dusting powder of iodoform, salicylic acid, and boric acid. Its application as a spray is cleanly, which in the case of cuts, is of especial value, as it allows of the stitches being put in at the surgery without further preparation. The value of gasoline in burns is, in the author's opinion, due to the fact that it destroys all germs that have been conveyed from the filthy clothes to the wound, and at the same time interferes with the broken down, half burnt skin cells, from which enzymes have been set free. These enzymes, being closely related to ptomaines, are undoubtedly responsible for the poisoning which always takes place in metallic burns, prolonged by the process of healing for weeks. He says that the necessary word of warning as to the inflammable nature of gasoline.

Medical Certificates.

Collie sates that medical certificates in legal cases should always be given with great caution. What should one do when asked to examine an injured person by both employer and employe, or by two parties to a suit in an action at common law? There is a general impression that, having a certificate to one side, it is disloyal—in-

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deed, dishonorable—to fish, as it were, on both sides of the stream, and furnish a report to what the lawyer call the "other side." This attitude assumes a very low standard. If one has given a certificate for a plaintiff which exaggerates his injuries, or if acting for the defendant, one has given a certificate minimizing what exists, obviously it would be impossible to report on the case to the opposite party to a suit. Medical men are not partisans in law suits; unlike the attorney, they have no "other side" to consider. Solicitors and barristers are paid to make the best case they can for their client. The doctor certifies facts as found, or should do so. There is, therefore, no reason whatever why a certificate should not be furnished to both parties and a fee charged to each. Of two things, however, one must be scrupulously careful. First, the facts must be presented in exactly the same way in both instances. Indeed, the safest plan is to make the second report a copy of the first. Secondly, both parties should be acquainted with the fact that such a duplicate has been issued. Loyalty demands this. It is always advisable to retain an exact copy of all letters and reports on medico-legal cases.—British Medical Journal.

Diagnosis and Therapy of Diffuse Syphilitic Diseases of the Kidneys.

Munk (*Dermatologische Zeitschrift*) says that syphilitic nephritis is a subject to which extensive attention in the past has not been allotted in clinical works. The clinician has heretofore been confronted with the question whether he was dealing with syphilitic nephritis or nephritis in a syphilitic. In most cases this question could be determined by specific treatment; but even here a complicating factor was to be considered, viz., the possible renal injury by the mercury. When the renal affection first became apparent in the course of mercurial treatment the doubt was even greater. Hence the uncertainty surrounding the diagnosis and therapy of this disease.

In recent years a number of diagnostic advances have become of the greatest service in the recognition of syphilitic diseases of the kidneys. First of all we have the Wassermann reaction. Secondly, from the work of Widal, Strauss, v. Noorden and particularly Schlayer, the determination of the renal functioning power. The findings in the urinary sediment, viz., the presence of doubly refracting lipoids.

In the great majority of cases of diffuse renal diseases we deal with degenerative rather than with inflammatory processes. As pointed out by F. v. Muller many of the cases are unjustly labeled nephritis, for inflammatory processes in the whole course of the disease are never found but from the very beginning they have a degenerative character. For this form of cases, v. Muller proposed the name of "nephrose" while Aschoff named them "nephropathy," in contradistinction to the nephritides proper. The degenerations that may effect the kidney are: albuminous, hyaline, amyloid, fatty, lipid, necrotic (mostly through chemical poisons), glycogenic (in diabetes).

Blood cells, casts and epithelium in the urinary sediment each have their diagnostic significance of the pathologic changes taking place in the kidney. The presence of lipoids is an absolute indication that the changes are not inflammatory but degenerative. In contrast with the usually isotropic neutral fat the lipoids in polarized light are doubly refracting. It has been shown that the demonstration of lipoids in the urinary sediment is of the greatest significance in diffuse syphilitic diseases of the kidney. From the observations that Munk has made in the past four years he states that the process in the kidneys in "acute" syphilitic "nephritis" is always one of lipid degeneration.

The clinical picture is usually as follows: The greatest number of cases occur in women. The leading symptoms are a severe,

anemic appearance of the patient and a more or less severe edema. The patients complain of great fatigue and weakness and dyspnea and sometimes, also of headaches. Vomiting may appear in a later stage of the disease as well as uremic symptoms. As a rule there is a complete absence of fever particularly so long as complications do not occur. Chills are not usually complained of. The quantity of urine is diminished—this is the only complaint about urinary troubles generally—and the color is not high. The onset is insidious. Particularly characteristic are the urinary findings. The quantity of urine varies between 300 c. c. and 1200 c. c. The color is yellow, reaction acid, specific gravity very high. The albumin content is usually high, as high as 28 pro mille and even higher (Hoffmann). In the urinary sediment are found a small number of red cells, somewhat more white cells, masses of epithelial cells and casts (hyaline, granular, waxy) and especially lipid casts, best examined, of course, in the polarization microscope.

The presence of the lipoids differentiates the condition from acute inflammatory conditions of the kidneys. It will also tend to rule out a nephritis due to mercury inasmuch as in this condition there is no lipid degeneration.

Anatomico-pathologically diffuse syphilitic diseases of the kidney are bound up with the so-called large white kidney. Microscopically the lipid degeneration is found especially in the first convoluted tubules whereas the glomeruli seem to be entirely intact. In addition to the lipid degeneration there is also found albuminous degeneration of the tubular epithelium. Between the two there are transitional stages. There are no inflammatory phenomena.

As regards the course of the disease, after 14 days to 3 weeks, sometimes earlier, the edema may disappear rapidly, the quantity of urine increases, the elements in the urine diminish but the albumin still remains considerable. General improvement finally sets in.

Albuminuria is, of course, seen in all stages of syphilis. An albuminuria in fresh syphilis is usually of a transitory character. In later stages it may denote a beginning chronic, vascular syphilitic nephropathy and the first sign of the involvement of the kidney is the appearance of the doubly refracting lipoids in the urinary sediment.

In addition to the "acute" syphilitic nephropathy there is also the chronic form of syphilitic renal disease—the nephritis interstitialis chronica fibrosa multiplex which as Orth has pointed out is not sufficiently differentiated clinically from ordinary contracted kidney.

The therapy of syphilitic renal diseases comprises the general therapy of nephritis together with the observance of special principles. In the stage of hydropsic symptoms and oliguria, indicating a parenchymatous syphilitic kidney, various diuretics are thought of. Diuretics must, however, be given with some caution, especially theocin because it may happen that the degenerated epithelium may suddenly be thrown off giving rise to lipuria, as observed by Ridder in Munk's clinic. Such a desquamation of the epithelial renal elements is naturally unfavorable for the restitution of the kidney. Strong diuretics are therefore to be avoided. Digitalis is sometimes very efficacious. Next, catharsis, provided the patient is not too weak to stand this form of elimination.

Potassium iodide, but not in too strong doses. Mercurial inunctions provided considerable edema does not exist.

Diet is very important to increase the patient's strength; eggs, malt extract, milk, if no edema, moderate amount of meat; malt extract with iron or with iodine, is very practicable. If the hydropsic symptoms are considerable the dietetic measures are the same as in other forms of nephritis.

Courses of specific treatment should be regulated with the Wassermann reaction.

The prognosis in early cases is favorable.

The Relation of Certain Forms of Exfoliative Erythrodermias to Tuberculosis.

Polland (*Dermatologische Zeitschrift*) under the name of exfoliative erythrodermia, is understood those independent inflammatory processes of the entire skin whose onset is accompanied by abundant desquamation and which soon take either an acute or chronic course and often terminate fatally. Such processes are not very frequent but they have been described under various names. The most suitable, perhaps, is the above. While this name throws no light on the etiology or the pathology of the condition, it is evident that positive knowledge in this respect is not yet in our possession and etiologically we are dealing with correlated affections. Hence the different classifications, which have only a subordinate significance, of the various forms and variations of exfoliative dermatitis by various authors.

As causes of exfoliative erythrodermia the following conditions have been proposed: trophoneurosis, infectious diseases, leukemia and pseudoleukemia, general disturbances of nutrition, tuberculosis. Particularly tuberculosis has been repeatedly mentioned as an etiologic factor of exfoliative erythrodermia and a connection between the two diseases has been pointed

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out by Jadassohn, Kanitz, Kopytowski-Wielowicyski, and Polland. In the present paper Polland reports another case.

This patient was a male, 38 years old, of negative family history. He could recall no past diseases but had always been healthy until November, 1912. At that time the skin of his face began to redden and desquamate. Finally the reddening and desquamation began to spread over his whole body. His general condition was not disturbed except for the presence of pruritis and a loss of hair. His appearance was as follows: the skin of the entire body, including the face and scalp, was lividly red, somewhat puffed, edematous in places and richly covered with dry and easily detachable scales. Owing to the itching there were scratch marks and bloody scabs. The hair (head and body) fell out easily. There were no changes in the nails. Striking enlargement of many lymph glands in the neck, axilla and groin—some single, others confluent. There was a ring of very small brownish nodules on the belly above the umbilicus. Although the temperature of patient was normal he felt chilly. Mucous membrane of mouth, also conjunctivae, red and swollen. Wassermann and v. Pirquet negative. Blood, reds, 6,000,000; whites 5,000; Hb. 90 per cent.; color index, 0.7. Stained smear, normal.

Under internal treatment with Fowler's

solution and external treatment with baths and salves (at first, vaselin; later, zinc paste and pinosol zinc paste) the skin quickly became paler and the desquamation decreased. The skin of the face remained red and there and on the head the desquamation was even more plentiful. General condition good. Once there was pustulation of one of the confluent lymph glands in the neck which was incised and evacuated. He then improved.

Histologic examination of excised piece of skin showed tubercular infiltration—lupus. The lymph glands were also tubercular. Tubercle bacilli in the giant cells could not be demonstrated.

The connection between the acute exfoliative dermatitis and tuberculosis is evidenced by the commencement of the cutaneous changes at the same time as the swelling of the lymph glands, the improvement after evacuation of the pustular abscess and the concomitant existence of lupus.

The pathology of the affection may be so regarded that it has to do with a general cutaneous reaction through the toxin of the tubercle bacillus as a toxituberculid or tuberculo-toxic erythema. Thus the absence of the v. Pirquet reaction is explained: the skin was already in full tubercular reaction so that a further augmentation of the local phenomenon was not possible. The clinical picture may be expressed as being a skin reaction of a blood circulating of the tubercle bacillus. It may further be argued that all cases are not idiopathic processes but symptomatic processes so that various causes may give rise to the same or similar cutaneous inflammations.

Modern War Surgery.

Fraenkel states that primary infection of gunshot wounds, due to tetanus bacillus, is seen in war as in peace. It is remarkable that so little of it is seen on the battlefield, as here there is more likely to be contamination with the soil, manure, etc. It is hard to determine which are clean wounds, or which are infected from the beginning, as by the time they reach the hospital they may have traveled several days, at times without being bandaged, and may have been exposed to all sorts of infection. The great majority of these cases clear up under antiseptic treatment and the results are indeed gratifying. Pneumothorax may develop with very little local or general disturbance. Gunshot wounds of the abdomen seem to do best if not operated on at once, but if allowed to wait until a circumscribed abscess forms. On the other hand, gunshot wounds of the brain should receive early attention. Holbeck is of the opinion that

tangential gunshot wounds of the skull should be operated on as soon as possible. In his work on this subject, the result of observations during the Russo-Japanese war, he points out that in cases that were operated in early the mortality was only fourteen per cent., while those that were operated in later showed a mortality of forty-nine per cent. The cases that were operated in early had the advantage of having to be transported only a short distance and then remained for a long time in a hospital. He thinks, however, that even if the cases were allowed to remain quietly in a hospital for some time and were operated in later, the results would not be so good. Early in 1913, the author reported four cases of tangential wounds of the skull which he had operated in after they had been lying on the battlefield for at least twenty-four hours and had made a three day trip to the hospital. All of the four cases resulted in cures. He had occasion to witness an autopsy performed in a case in which a prophylactic operation had been done. The autopsy showed a diffuse purulent meningitis originating from the wound made at the time of operation and on the opposite side of the brain there was an encapsulated hematoma which showed beginning infection, the results of the prophylactic operation. In view of these facts no rule can be laid down as to primary and secondary operations and every case has to be decided for itself. As a result of his observations he concludes that the present war has taught us nothing new in war surgery and that probably the best plan is to interfere as little as possible.—Wiener Klinische Wochenschrift.

A New Malaria Parasite of Man.

An important communication has been made lately to the Royal Society and published in its Proceedings by Dr. J. W. Stephens, professor of tropical medicine in the University of Liverpool, describing a new malaria parasite of man. It appears that while examining a blood-slide, taken from a native child at Pachmari, C. P. which had been sent to Liverpool by Major W. H. Kenrick, I. M. S., Professor Stephens was struck with certain peculiar appearances of what he took at first to be malignant tertian parasites. After a long and careful examination and comparison with many other specimens of the latter organism he arrived definitely at the conclusion that this Indian parasite was unlike any malignant tertian parasite he had ever seen or could find figured in any of the textbooks or journals. He defines the chief peculiarities of this new form of the malaria parasite as follows: It is, judging from the

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stained specimens, extremely amœboid; the cytoplasm is always scanty—i.e., the amœboid processes are delicate or thin and the parasite has but little bulk or density; the nuclear chromatin is out of proportion to the volume of the parasite. The points in which it differs respectively from the malignant tertian, simple tertian, and quartan parasites are given in detail, and the peculiar forms of the new variety are shown in a series of drawings attached to the original communication, which has also been published in the last issue of the An-

nals of Tropical Medicine and Parasitology. As a result of his careful and prolonged study of this Indian parasite, Professor Stephens believes that its morphology differentiates it from any malaria parasite of man yet described, and he proposes is an important addition to our knowledge of the malarial infection, and doubtless further researches concerning it will be made in England, with imported material, as well as by Indian experts on the spot.—London Lancet.

The Treatment of Uterine Hemorrhage in Young Women.

In dealing with this subject, Schickele, of Strassburg, considers only the menorrhagia and metrorrhagia that occur early in life and does not refer to hemmorrhages, which are the result of inflammatory conditions, displacement or tumors of the genital organs. He points out that uterine bleeding in young women is frequently followed by normal menstrual conditions even without medical aid, showing that no real disease existed, but merely a transitory disturbance, varying with the individual. Many cases of profuse menstruation are cured by ergot preparations, given per os, subcutaneously or injected into the cervical tissue, a fact pointing to inadequate contraction of the uterine muscle as the etiological factor. Numerous patients are met with in whom the ergot group is of no benefit and in whom curettage is done. Frequently, however, the curettings show no diseased mucous membrane and the operation stops the hemorrhage, because in Schickele's opinion, the scraping causes intense contraction of the uterus. Permanent benefit from curettage in cases, in which profuse menstruation is due to disturbance of internal secretion, is not to be expected, although Schickele has observed in such patients improvement in regard to the regularity, but not to the intensity of menstruation. He believes the curette is used much too often and that in most cases it does not produce permanent benefit. Curettage is, however, not to be discountenanced in all cases as the possibility of hemorrhage, due to an incomplete abortion at a very early stage, even in very young persons, must not be forgotten and furthermore in very profuse bleeding, curettage is the only procedure which always succeeds in controlling the hemorrhage. It should in such cases be followed by packing of the uterus with gauze, saturated in a 5 or 10-per cent. soda solution, as this causes very strong contraction of the uterine muscle.

Often a change of climate, employment or nourishment has a beneficial influence on profuse menstruation. Menorrhages frequently ceases in poorly nourished women when their general condition is improved, probably because more efficient function of the ductless glands is brought about in this way. Excessive menstrual bleeding, occurring in tuberculous or chlorotic patients, is ameliorated by treatment of the constitutional disease. Constipation deserves special attention as it often causes menorrhagia

as a result of the hyperemia of the pelvis produced by it. In spastic constipation Schickele recommends belladonna.

Frequent and copious menstruation in individuals, possessing a hypersensitive vasomotor system, is usually controlled by proper dieting, aided by hydrotherapy and the administration of calcium salts, provided this treatment is carried out systematically for a long time. When hypoplasia of the uterus exists, ovarian extract is indicated. In cases in which evidence of disturbance of internal secretion is obtained, Schickele considers the diet of great importance. It should consist mainly of vegetables, coffee and alcohol being avoided. He also advocates large doses of sodium bicarbonate, 90 to 150 grains a day for these patients.

Recently numerous organ extracts have been recommended for menstrual disturbances. Some authors report good results in elderly women from mammary extract. Perhaps it will also prove of value for hemorrhage in youthful patients. Striking beneficial action is mentioned by many as being obtained with hypophysis preparations. Schickele's experience leads him to conclude that the latter are efficient in certain cases only. He believes their ability to cause contraction of the uterus probably accounts for their efficacy in uterine hemorrhage, but agrees that a complete explanation of their action is not as yet available.

Regarding the use of X-ray in the treatment of excessive menstruation in young women, not much has been written. Some authors have employed the rays with success. Schickele, however, looks upon this form of treatment as unjustifiable, as long as we do not know to what extent the action of the Roentgen rays interferes with subsequent pregnancies.—Med. Klinik.

Ambidexterity.

Jones states that in 1868 when he was engaged in operative surgery on the eye he realized the great disadvantage of not being able to use his left hand equally with his right. He overcame this difficulty, but found that when tired from overwork he could not trust his left hand. In obstetric practice he learned the truth of the aphoristic teaching of the late Dr. Robert Barnes "that every obstetrician should learn to shave himself with his left hand." As a boy at college, MacNaughton-Jones owed his superiority as a handball player to his ambidexterity and this capacity made him an expert in the use of the gloves.—"Ambidexterity and Mental Culture."

Infantile Diarrhea in Brisbane.—The-lander (Australian Medical Gazette) says that the treatment of epidemic infantile diarrhoea in Brisbane, the so-called "gastritis," gastro-enteritis, or summer diarrhoea of infants. The doctor regards as diagnostic features the arrest of the digestive functions and the appearance of the typical green stools with their characteristic odor. The writer has treated over four hundred cases, ranging in age from eight days to seven years. Of the cases treated by him from the beginning, only two died: in one of these cases intussusception developed, and in the other a relapse occurred.

The most characteristic feature in the gastro-intestinal condition is the stool. There is often costiveness at first, in which case the child is almost invariable feverish, and the first stool are not usually green, but whitish, or very pale yellow. This is so frequently the case that any child who has passed an unusually pale motion, and is out of sorts, but not jaundiced, should for safety be treated as gastro-enteritis, no matter what symptoms preponderate. After the pale motions, often loaded with white curds, and generally of a characteristic mawkish fetor, come the typical green mucous stools, with some curds, pale or green mucous, and traces of blood or pus in variable proportions. The disease should be well under treatment by this time. The temperature has gone up to 103 deg. F., and in one case to 106 deg. F.

He has evolved a definite system of treatment. He never uses gastric lavage, neither enemas. The latter were used at one time with discouraging results, and the former did not appear to be rational treatment. The first instruction is to stop all food, and to give water very copiously. It is useful to give albumen water or barley water; besides, it pleases the anxious mother. A little salt should be added to the albumen water, for it makes the child drink better. When a child is in a very low condition, repeated drinks of warm water are as good a stimulant as is required for a few hours; thereafter, liquid peptonoids may be given.

The first medication is, as a rule, calomel, one or two grains every hour or two until six doses are given. If costiveness be marked, however, an initial dose of castor oil is useful, followed by calomel. In the early morning sulphate of magnesia is given in doses of from 20 to 30 grains, adding a little salol, or menthol and glycerin. Menthol seems to be better when there is any tendency to vomiting. If the vomited matters be very acid, carbonate of magne-

sia (5 to 15 grains) is useful. Diluted sulphuric acid or hydrochloric acid is often of service.

Nutrition must not be overlooked; a large amount of water should be given. Next day, one or two doses of calomel are given, and sulphate of magnesia the next morning. It is rarely necessary to continue this treatment more than four days.

The action of the magnesia-sulphate seems to be three-fold: purgative, mildly antiseptic and precipitant. The toxic albumoses or albuminoid substances generated in the intestines are precipitated by the metallic sulphate, and their absorption thus hindered, and to this action is probably to be attributed the fact that even very collapsed infants stand the drastic medication very well. The stools soon lose their fetor, and, as a rule, the yellow color returns on the third day. The magnesia is given four or five times a day until the stools are yellow again. No milk or milk products are given until the stools are yellow.

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A Safe and Reliable Analgesic.

It is difficult to find an efficient remedy for the relief of pain which at the same time produces no narcotic effects with their distressing and oftentimes disastrous sequelae. For this reason the opiates, effective as they may be in soothing pain, are usually contraindicated. A habit may be induced which in many instances it is impossible to break. Phenalgin however controls pain with remarkable efficacy and because of its composition is free from all danger of causing a drug habit. Since it possesses the therapeutic remedies of the narcotising agents without their drawbacks it has a wide

field of use. Phenalgin is especially indicated for the relief of dysmenorrhea, from which so many women, from the sedentary nature of their employment suffer nowadays. When these periodical pains recur, the victim is apt to fly to a narcotic to gain a respite, and the consequence too often is that a drug habit is formed. Through the use of phenalgin, however, the practitioner can promptly control painful menstruation with gratifying avoidance of all tendencies to drug habituation. Equal confidence may be placed in the use of phenalgin in other conditions. Thus in the treatment of alcoholism, phenalgin may be relied on to relieve the unpleasant symptoms and to restore the victim to normal condition in a natural manner. In fact in all disorders or diseases in which pain is a prominent symptom, such as cephalalgia, gastro-intestinal complaints, la grippe, rheumatism, lumbago, malaria, neuralgia, neurasthenia and gout, phenalgin affords prompt and satisfactory relief, without locking up the secretions or causing constipation.

Recovery From Bone Tuberculosis.

The following interesting case records the experience of a well known physician with the so-called "intensive iodine treatment."

The patient was a young man of 22 years of age. Mother and one sister had died of pulmonary tuberculosis. Two years ago first noted tender spot on right shoulder opposite about the third dorsal vertebra over the scapula. Gradually this became more and more painful, an abscess finally developing and breaking open five or six months after first appearance of soreness. This abscess discharged freely for some time but under thorough antiseptic treatment showed substantial improvement. In spite of every effort, however, it was impossible to heal the sinus that persisted. From time to time small spiculae of bone were discharged, and gentle probing plainly indicated that a considerable portion of the scapula was involved. A diagnosis of tuberculous osteitis was made and operation advised. This was done, in due course, the sinus being laid open, all diseased tissue cut away, and the affected part of the bone curetted with painstaking thoroughness. Some improvement followed, but still the wound refused to heal. Another sinus developed which discharged more or less continuously. Repeated microscopic examinations of the discharge were made but none showed

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After about two weeks the gain in the patient's condition became very noticeable; the discharge was markedly decreased and the sinus showed evidence of healing at the bottom. Recovery from this point was progressive and two months and four days after beginning treatment the wound was closed perfectly and the patient had gained six pounds in weight.

Needless to say ample quantities of good food and fresh air were insisted on throughout, and nothing was neglected that could contribute in any way to the patient's recovery.

The influence of Burnham's Soluble Iodine was so marked, however, and the result obtained was so decisive that there can be no doubt that credit for such a happy outcome is mainly due to this dependable iodine preparation. Its solubility and rapid and complete absorption without toxic effect unquestionably allowed the introduction of a pure iodine in sufficient quantities and for a sufficient period to assure counteraction of the bacterial toxins, a stimulation of bodily nutrition, and a general augmentation of the process of repair.

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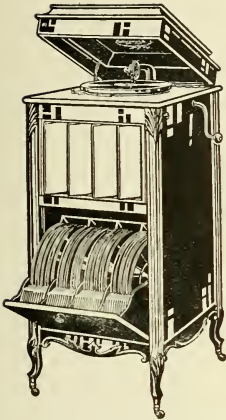
While comparatively a new product, there is sufficient evidence at hand to warrant the opinion of one writer who expresses the belief that "in Corpora Lutea we have a preparation that will be a blessing to womankind."

Can the Measles Germ Live a Long Time?

The following case is very conclusive. It concerns a lady 30 years old, four months pregnant. Her first child, 6 years old, contracted measles, complicated with broncho-pneumonia, and died. After the death of her child, the lady, previously hysterical, was taken with a very severe nervous trouble and compelled to leave her home and go to the country. Before going she packed in a box all the child's toys. When seven months pregnant her nervous condition demanded a premature delivery, and she was sent to a special clinic, where there was no measles and had not been any case of measles nor any other infectious diseases. After twenty days her condition improved so much as to feel herself again.

From the time that her ailment commenced she was isolated with her maid, and never received anybody. One day she opened the box of toys of her dead boy. A week after I was called to see her. She had a cold with slight fever. The fever continued until Koplik's sign appeared and the eruption of measles, which was complicated with a very severe bronchitis. The patient recovered.

I report this interesting case because the pathogenic cause of measles can persist many months. In fact, during the three months' absence of my patient, her house was hermetically closed, and from careful inquiries I was assured that nobody had entered it. We are therefore compelled to admit that my patient was infected by handling the toys of her boy who had died of measles.—Le Progres Medical.



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An Original Remedy.

The spittle of the sperm-whale—spare yourself the trouble of looking it up in European pharmacopœias; you will not find it. It is in the far East, principally in Tonquin, under the name of Long-Duyen-Huong, that this spittle is used, mainly as a remedy in asthma. We gather this from a recent article by M. Charles LeClere, consulting physician at Mont-dore.

When a whale is stranded or killed, he says, the natives carefully collect the salivary secretion. This air-dried saliva is a gray viscid substance of slight elasticity. The taste is said to be somewhat bitter, and it is taken in doses of from fifteen to thirty grains a day. Cut into bits it is administered in any decoction or in water flavored with lemon. Mr. LeClere cites the case of a missionary priest, who, having formerly taken potassium iodid for his asthmatic attacks, made a trial of Long-Duyen-Huong. He took fifteen grains a day and obtained the same relief in four days that a course of iodid had taken fifteen days to give.

The author of this curious paper tried the remedy in the case of a peasant and secured a remarkable result without, in the least, disturbing the patient's extremely sensitive stomach. Later, the remedy growing scarce, he was obliged again to put his patient on the iodid; but the stomach became disturbed, the appetite was lost and the results proved much less satisfactory. It seems, therefore, that Long-Duyen-Huong is a valuable succedaneum to the iodids, and M. LeClere gives us the reason. In all species of animals the saliva is an important excretion. It is evident that the whale, immersed in a medium like the sea, containing large amounts of potassium and of iodine, must absorb a considerable quantity of these substances. The saliva becomes charged with them, and those who take this dried spittle are, in fact, absorbing iodid of potassium. The activity of the medicament must be ascribed to the large proportion of the iodid it contains. Doubtless, there are other active constituents, and the efficacy of the drug in relieving asthma, in which the iodids are almost our sole resource, tends to strengthen this logical conclusion. Besides its therapeutic value, Long-Duyen-Huong possesses another remarkable virtue in its perfect tolerance by the human organism. Its superiority in this regard to the metallic salts is readily understood. In the whale's saliva we have every reason to believe the iodids to be in organic combinations. The mineral salts are much less readily assimilable

than our foreign organic remedy and therefore act less happily in the animal economy.—*Le Monde Medical*.

The Motorist's Fuel.

Buist notes that the chief factor that controls the present and future price of the motorist's fuel is the ratio of expansion of the world's supplies to that of the motoring movement. When the former exceeds the latter then the price of fuel must become cheaper. An investigation of the world's motor trade at the moment suggests that, as regards private vehicles of the middle and the large sort, the possible rate of expansion has reached something like a fixed quantity. Therefore, as far as these are concerned, fuel production is either going ahead or is about to go ahead of demand. On the other hand, the development of the light car and the commercial motor vehicle has only just begun. The latter would upset all calculations were it not certain that it will soon be run either on other fuel than gasoline or on much cruder spirit than is used for the pleasure car, therefore creating a demand for the residuary product and so making for cheapness all round. But the light car, which is perhaps the vastest field to be entered, will call for the use of the highest grade spirit. The situation of supply and demand would look grave were it not for the fact that the average light car is extremely economical of fuel; a vast number of these machines can be brought into use without making any heavy additional demand by comparison with the increased consumption of fuel when big batches of large cars are brought into use. If one add, therefore, to these facts the all-important one that the requirements of shipping service are all the time creating a demand for residuary products, it may be plainly seen that the price of fuel will probably not rise.—*British Medical Journal*.

Dogs in the Sanitary Service of Armies.

Granjux states that in most European armies the medical corps are provided with dogs that are trained to the task of finding wounded soldiers. Shortly before the outbreak of the present war there was held in Belgium an exhibition at which the wonderful feats of these animals were demonstrated. At Fontainebleau, France, there has been maintained under the auspices of a private national society a so-called "military kennel" at which various methods of training dogs for military purposes have been

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studied. For instance, these animals have been taught to bring back the cap of the wounded soldier, or in lieu of this something removed from his pocket. In order that these animals may become proficient in their task, it is necessary that they should live with the soldiers for sometime, accompanying them on the march, and getting used to the roar of guns and the smell of powder. There can be no question that on the widespread battlefields of today these trained dogs can render a distinct service in helping the medical officers gather in all the wounded.—Le Caducee.

Geographic Distribution of Appendicitis.

Murray claims that diet is a very important factor, probably the important factor, in the etiology of appendicitis. As this disease prevails among meat-eating nations it is further probable that the view of the late Dr. Williams is the correct one, namely, that the most important constituents in our food predisposing to appendicitis are the saturated fats, such as are contained in beef and mutton. Apart from the question of diet, other contributory causes have to be considered. Irregular meals, the "quick lunch," and imperfect teeth all play their part, and the general want of physical exercise is very noticeable.—The London Lancet.

Thyroid Grafting in a Myxedematous Child.

Voronoff, who reported to the last *Congres de Chirurgie* a completely successful case of ovarian grafting, has communicated to the Academy of Medicine the results of thyroid grafting in a child aged 14 years, affected with myxoedema from the age of 8, which followed on scarlet fever.

The disease, besides the classic physical signs, was accompanied by a total arrest of intellectual development. The child was feeble, apathetic and stupid, incapable of attention and of mental work.

He engrafted in the neck a lobe of the thyroid from a monkey attaching it by a large number of delicate sutures, but without anastomosing the arteries of the gland directly with those of the child, according to Carrel's method. This graft succeeded well, and new vascular connections were rapidly established between the engrafted tissue and the subject.

An interesting point is that, little by little, not only did the physical characters of myxoedema disappear, the obesity diminish, the puffy countenance become oval, the thick lips become thin, and the eye take on a live and alert look, but the intelligence also developed in like manner.

The child became attentive and studi-

ous, and in six months its intellectual status had become entirely normal. Dr. Voronoff performed this operation at the Clinique Ste. Marguerite of Nice, before a considerable number of medical men. He thinks that this method may become general, and that it will provide a mode of treatment in myxoedema more certain and more definitive than the internal administration of thyroid preparations, as hitherto used.—London Lancet

Nerve Cells in the Aorta and Angina Pectoris.

In a histological study of the innervation of the ascending and transverse parts of the aortic arch in dogs, Manoelian was struck with the existence of numerous nervous centres in the posterior cardiac plexus. This plexus, situated in front of the trachea and behind the aorta, is composed of a rich anastomosis of nerve filaments, and here were found ganglia composed of cells of the sympathetic type. For the most part these were microscopic, but sometimes it was possible to detect them with the naked eye in silver-impregnated sections. Their number was found to vary, and in addition it was not uncommon to find in the interstitial tissue of the plexus solitary nerve cells. Seeing that the posterior cardiac plexus is formed by the majority of the sympathetic cardiac nerves and the cardiac nerves of the vagus, and that the cardiac plexus itself plays such an important part in the innervation of the heart and large vessels, the existence of these nerve cells would appear to be a very important observation. More remarkable still, Manoelian found solitary nerve cells of the sympathetic type in the connective tissue of the middle coat of the aorta. Nerve fibres, of varying thicknesses and more or less wavy, ran from the connective tissue towards the elastic fibres and the smooth muscle cells where they terminated, either in a rounded knob-like swelling or in a finely-drawn-out end. Close to the smooth muscle cells there were arborizations similar to the motor plates of striated muscle. The connective tissue of the middle coat was found to be richly innervated, and apart from the fibres to the elastic tissue and the muscle cells a number of these nerve fibres were found to end in this situation. The way in which these fibres terminated varied. Some had a clubshaped extremity, and these clubs might be grouped together in numbers; others had a knob-like ending, whilst others again became resolved into fine fibrillae, which formed a delicate skein. Since all these nerve fibres were

not in connexion with motor elements but terminated in the connective tissue, Manoelian considered that they were sensory in nature. Sensory terminations have never before been observed in the middle coat, but they must play an important part in the mechanism of dilatation and constriction of the arteries. It would appear that the stimulus is carried by the sensory vascular fibres to their cells, which by their central prolongation send it directly or indirectly to the vasomotor neurones, the peripheral prolongation of which receives the stimulus to the arterial muscle cells, and that, in short, we have to deal with a reflex arc beginning with the sensory arborization and ending with the motor nerve termination.

The idea formerly held that angina pectoris was due to lesions of the coronary vessels has not been supported by pathological observation, for no lesion of the coronaries has been found at autopsy in cases of angina pectoris, whereas stenosis and even obliteration of the cardiac arteries have been observed in cases in which during life there had never been any attacks of angina. Further, it is a matter of experimental observation that ligature of a branch of a coronary artery is followed by cessation of contraction in that part of the heart supplied by it; after ligature of two coronary arteries the heart ceases to beat. Nothnagel, in studying the relation between angina pectoris and peripheral vascular spasm accompanied by hypertension, distinguished a vasomotor type of angina pectoris. Vaquez and others have shown that the blood pressure, even if it is normal or diminished during the intervals, rises considerably during an attack. The increase of arterial tension is attended by hypertrophy of the left ventricle and dilatation of the commencement of the aorta, but even before the production of this definite lesion a transitory distension may be inferred from the accentuation during acute rises of tension of the second aortic sound, which becomes normal again as the tension falls.

The point to bear in mind is that it is not only the heart but also the aorta that bears the brunt of increased arterial tension. Vaquez concluded that any accidental increase of pressure, distending an already diseased aorta, would bring about anginal attacks. This theory is strongly supported by Manoelian's discovery of numerous sensory nerve terminations and nerve cells in the middle coat of the aorta, as well as the large number

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of nerve centres externally in the posterior cardiac plexus, all the more so as aortitis and periaortitis are almost constant phenomena in cases of angina pectoris.—The British Medical Journal.

The Value of Abderhalden's Reaction.

A referendum has lately been taken by the Medizinische Klinik of Vienna, which has addressed a series of questions to numerous authorities whether Abderhalden's reaction is reliable. The answers, published in its issue of March 15, show an almost unanimous belief in the importance of this reaction in the hands of experts. Zweifel (Leipzig) has found the diagnosis of pregnancy by this reaction very reliable, and during the last six months he has tested it in ninety cases, in many of which it was the only sign of pregnancy. He also found a negative reaction of great value in the exclusion of pregnancy in doubtful cases. Veit (Halle) has found the reaction give uniform results in the hands of experts. It was invariably positive in forty-five cases of advanced pregnancy, and in fifteen cases of pregnancy in the first month it was only once negative. He calculates that the reaction is misleading only in 5 per cent. of all cases. In sixty cases of cancer the reaction was only twice negative, all the others giving a positive reaction to carcinomatous tissue. The report from Prof. Bumm's hospital in Berlin states that the reaction is reliable in uncomplicated cases, and that the optical method is the most accurate. During the past six

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months 120 cases were investigated. Of these sixty-nine cases of pregnancy gave a positive reaction, and in twenty cases in which pregnancy did not exist the reaction was negative. It was doubtful in three cases, and in twenty-eight cases it was misleading. The reaction was considered non-specific, and was therefore unreliable in the differential diagnosis of pregnancy and tumors. In 48 per cent. of cases of tumor the reaction to placental tissue was positive, although pregnancy could be excluded. Opitz (Giesen), who has employed the dialysis method only, has almost invariably found the reaction agree with clinical evidence. It was, however, observed that the reaction is not invariably uniform when repeated on the same serum, and a single test in each case may therefore be misleading. Though the practical value of the reaction is great, its general utility is much limited by difficulties of technic. Stoeckel (Kiel) considers the dialysis method unreliable, but he admits that his unsatisfactory results may be traced to faulty technic, although the greatest care was taken. The report from Prof. Herff's hospital in Basel is most laudatory. During the last six months from eighty to 100 cases have been investigated, and in clinically doubtful cases of pregnancy a diagnosis based on the reaction invariably proved correct. Only in one case was it misleading, and this was due to a fault in the dialyser. The report from Prof. Hofmeier's hospital in Wurzburg states that the results were first misleading, but when the technic was revised they became almost invariably reliable. Particularly in the diagnosis of extrauterine pregnancy was the reaction found useful. Kroemer (Greifswald) has employed the dialysis method only, and finds the reaction misleading only in 2 per cent. of all cases. He has investigated over 100 cases during the last six months, and once observed a positive reaction in a case of myoma of the uterus, and once a negative reaction in an old case of placental polypus. Kustner (Breslau) considers the reaction reliable on the whole, but faulty results still occur occasionally, in spite of improvements in technic. He considers it so complicated that it should be confined at present to experts. Winter (Konigsberg) considers the reaction specific, and has worked with the dialysis method only. During the last six months he has investigated forty-two cases, in seven of which the differential diagnosis between early or extrauterine pregnancy and inflammation of the uterine appen-

dages could not be made clinically. In these cases the reaction was invariably correct. In his opinion, also, the technic of the reaction is too complicated for general use. Zangemeister (Marburg) regards the dialysis method as thoroughly reliable in expert hands. It was negative in one case, in which the differential diagnosis between extrauterine pregnancy and disease of the uterine appendages could not be clinically established. An operation showed a tumor of the uterine appendages. Sellheim (Tubingen) has worked with the dialysis method only, and finds it very satisfactory. In ninety-four cases of pregnancy the reaction was negative only in four cases, and in three of these pregnancy was complicated by severe anemia or vomiting. Menge (Heidelberg) finds the reaction misleading in 7 per cent. of all cases. He regards a negative reaction as strong evidence against pregnancy, the existence of which cannot, however, be irrefutably established by a positive reaction.—British Medical Journal, May.

Chronic Catarrhal Diseases.

Chronic catarrh never fails to indicate general constitutional debility. Local treatment is always desirable but for permanent results efforts must be directed toward promoting general functional activity throughout the body, and a general increase of systemic vitality. The notable capacity of Gray's Glycerine tonic comp. in this direction readily accounts for the gratifying results that can be accomplished through its use in the treatment of all chronic catarrhal affections, but especially those of the gastrointestinal canal and respiratory tract. The particularly gratifying features in the results accomplished by Gray's Glycerine Tonic Comp. are their substantial and permanent character. This is naturally to be expected since they are brought about through restoring the physiologic balance of the whole organism.

Congenital Defect, Sixth and Seventh Cranial Nerves.

Smith reports the case of a male aged 3 years who was brought for weakness of one side of the face. This defect had been noticed since the second week of life. Delivery was moderately easy and no instruments were used. There was complete seventh nerve paralysis on the right side and also paralysis of the external rectus on the same side. The condition suggested a congenital defect of the sixth and seventh cranial nerves.—Proceedings of the Royal Society of Medicine.

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Modern Theories of Hysteria.—Ormerod, (The London Lancet) states that the fundamental defect in hysteria, according to Janet, consists in a feebleness of mental synthesis; yet this is a condition that has to be inferred and cannot be directly observed. But there are certain very common mental traits open to observation to which Janet gives the name of mental stigmata, adopting the term used by Charcot for certain common bodily symptoms. Among such mental stigmata are: (1) Suggestibility, not merely that an idea can be easily implanted in a patient's mind, but that it tends to develop there and engross the whole mind. (2) Distractibility. This is merely the obverse of suggestibility, while the patient is occupied with one idea she forgets all others. (3) feebleness of will, so-called "aboulia." Whatever the will means it implies at the lowest estimate a weighing and comparison of many motives, which is just the sort of thing which the hysterical patient cannot do. (4) Changeability and waywardness, as of symptoms, so of disposition and desires, a trait that has been most unjustly transferred to the whole female sex. (5) Defective memory amnesia. In addition to a localized amnesia there is a loss of memory which may be called "systematized." The patient forgets everything connected with a particular person, or a particular event, or even a particular conception. It is a class of memories that disappears, not a series of events in time. Hysterical patients are apt to be dominated by fixed ideas. So long as the fixed idea remains buried in the subconsciousness it may give rise to no overt trouble, but should circumstances arise to weaken the grasp of the personal consciousness, so that it vacates its proper dominion, then the subconscious idea may assume command.

Etiology of Epidemic Cretinism, Congenital Goiter, and Congenital Parathyroid Disease.—McCarrison, in the London Lancet, says that the exciting agent or agents of goiter exist in the intestinal tract of sufferers. To identify such an agent or agents, he has fed white rats (1) on the filtrate of an emulsion of goitrous persons' feces, and (2) on aerobic and on anaerobic cultures of organisms grown from the feces of goitrous persons. Among the results noted are these: 1. Out of sixteen animals, born of a goitrous mother which consumed fecal filtrate prior to and during pregnancy, three were born cretins, while the forty-seven animals born in other cages showed no clinical or pathological signs of this condition. 2. Of 31 animals, born of goitrous

mothers, which consumed either fecal anaerobes or the filtrate of a fecal emulsion, fifteen were found to have congenital parathyroid disease. Of these, two-thirds were born of mothers consuming the anaerobic cultures, while one-third were born of a mother consuming a fecal filtrate which contained the toxic products of these anaerobes. The parathyroids were normal in sixteen animals born of goitrous mothers in other cages. 3. Fecal organisms which grow aerobically on agar, while capable of causing marked hyperplasia of the thyroid gland, do not appear to be capable of producing any ill-effect on the parathyroid glands. The writer concludes that of the offspring of goitrous parents a small percentage are born cretins, approximately 63 per cent. are born with congenital goiter, 32 per cent. are born with congenital parathyroid disease, and 33 per cent. are born with normal thyroid and parathyroid glands. Cretinism and congenital goiter are due to the action of toxic substances derived from the intestines of the goitrous mother on the fetal thyro-parathyroid mechanism. Cretinism represents the maximum, and comparatively rare, effect of these toxins; congenital goiter their minimum, and comparatively common, effect. Between these extremes all degrees of thyroid involvement may occur with or without associated swelling of the gland. Congenital parathyroid disease is due to the action on the fetal gland of the toxic products of organisms, present in the intestine of the goitrous mother, which are capable of growth under anaerobic conditions.

Regeneration of the Uterine Mucosa After Curetting.—Richter (Gyn. Rundsch) mentions his observations based on a series of eighteen cases in which the uterine mucosa was submitted to histological examination after curetting at periods varying from one to twenty-six days before hysterectomy. It is necessary to distinguish the processes of regeneration in cases that have been superficially curetted from those that have been deeply curetted. During the first few days after curetting the conditions are practically the same in both procedures and the surface is merely coated with a layer of fibrin. After superficial curetting, restoration of the membrane occurs as early as the fifth day; whereas, in those cases in which more pronounced scraping has been done, epitheliation is not complete until the ninth day. The epithelium is derived from the remnants on the surface or glands and proliferates over the raw surface from these points. As early as the third day delicate vessels of fibroblasts may be found

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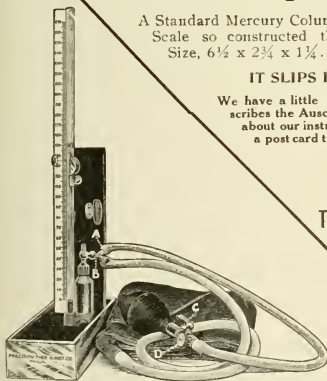
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and the latter were demonstrated as late fifth day. Regeneration of the glandular as the twenty-sixth day. This is followed elements in the pronounced curetage was by the formation of true glandular tissue not found completed two days later, but from which the connective tissue is formed, only a few depressions could be demonstrated fibers of which have been observed by the ed from which the glands are undoubtedly

developed later. In the superficial cureting the new glands are formed early from the remnants of the previous structures. The entire process of regeneration is therefore similar to the formation of the mucous membrane after labor and menstruation, especially in those cases where the superficial cureting has been done. These findings were controlled by operations done in dogs where the cureting was done through a laparotomy wound and the uterus extirpated later on. The results practically confirmed those in the human subject.

Isolation and Quarantine Periods in the More Common Infectious Diseases.—Ker (Edinburgh Medical Journal) discusses the isolation and quarantine periods in scarlet fever, diphtheria, measles, rubella, whooping-cough, chickenpox and mumps.

Scarlet Fever.—The normal minimum isolation recommended for this disease is six weeks—a period which may be either much too short or unnecessarily long, according to the condition of the individual case. The question of detention resolves itself into the question, Is desquamation infectious? a fact by no means proven. Priestley discharged from the hospital 120 desquamating children without causing a single secondary case. Others have adopted four instead of six weeks as the minimum period of detention in the hospital without increasing the return case rate. Ker believes that the adoption of five instead of six weeks as the minimum period of isolation would be a great step in advance. He considers seven days an ample period of quarantine for contacts.

Diphtheria.—Patients should be isolated until the necessary negative cultures have been obtained. Quarantine is unnecessary for perfectly well contacts who have given two successive negative cultures within three or four days.

Measles.—The usual isolation period for measles is two weeks from the appearance of the rash. In hospital outbreaks, however, measles patients are regarded as free from infection as soon as the rash has disappeared. The quarantine period of measles in hospital outbreaks is fifteen days; eight days may be regarded as a minimum, and nine or ten days more frequently from the probable moment of infection to the occurrence of the first symptom, and from thirteen to fifteen days to the appearance of the rash. Eberstaller at Graz allows contacts to attend school for eight days and closes the infected class from the ninth to the fourteenth day.

Rubella.—The period of detention for

rubella is ten days. Netter and several other French authors, however, hold that a case is no longer infectious after the disappearance of the eruption. The incubation period is from twelve to twenty days. Contacts may safely attend school for eight or nine days after exposure and thereafter should be excluded until the twenty-first day is past.

Whooping-Cough.—Ker has the gravest doubts as to the infectivity of whooping-cough when the paroxysmal stage has fully developed, and considers that, in favorable circumstances and with otherwise healthy children, isolation is unnecessary after the paroxysmal stage has lasted for a week or ten days.

Chicken-Pox.—Ker believes a patient to be infectious until the last crust has separated. As regards quarantine, contacts are allowed to mix with other children up to the eleventh day, when they are isolated until the twenty-second. School attendance can safely be allowed for ten days from the first exposure, and be resumed after three weeks from the last contact with the patient.

Mumps.—The usual isolation period for mumps is three weeks, but Ker has never seen harm result from allowing patients out of isolation when a full week has elapsed after the disappearance of swelling. Exclusion of contacts from the thirteenth to the twenty-sixth day from the date of the first and last exposure respectively would be a safe rule for schools to adopt.

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The Infection of Children With the Bovine Tubercle Bacillus—(British Medical Journal) Mitchell states that twenty-four of seventy-two cases with tuberculous cervical glands were under three years of age. Of these twenty-four, only two were proven to be of the human type; the rest were all bovine. Eighty-four per cent. of the children thus afflicted two years of age had been fed from birth on unsterilized cows' milk, and in only three cases was a history of tuberculosis in the family.

The author states that cows not having tuberculosis of the udder may readily transmit the tubercle bacillus in the milk. He emphasizes the extreme importance of adequate dairy inspection and the taking of the tuberculosis cows out of the herds, as one tuberculous cow may readily infect the milk of a good sized herd.

The relation between the channels of infection and the group of glands involved is discussed. He says the more frequent involvement of the glands in front of the sternomastoid muscle in the upper carotid region is strongly suggestive of the faucial tonsils being more often a source of infection than the adenoids. He investigated the faucial tonsils in 64 consecutive cases of children suffering from tuberculous disease of the upper deep cervical glands. twenty-four of these cases showed histological evidence of tuberculosis in the tonsils, but no clinical signs were present.

The chief sites for tuberculous lesions in the tonsil are in the deeper parts of the crypts, especially the supratonsillar group, or immediately under the mucous membrane near the mouths of the crypts, or deep in the tonsil close to the posterior capsule. He concludes that cows' milk containing bovine tubercle bacilli is clearly the cause of 90 per cent. of the cases of tuberculosis cervical glands in infants and

children residing in Edinburgh and the surrounding district.

Typhoid Bacilli Carriers.—Hirschbruch, Berliner klinische Wochenschrift, Berlin, June 22, 1914, states that the great difficulty in discovering bacilli carriers is that they eliminate the bacilli only intermittently, as he shows by a number of instances from the Metz station. One woman was examined daily and the findings were negative fifty-two times and positive only twice, and yet typhoid bacilli were found at necropsy. In another woman examined regularly once a month, at one time, there was a negative interval of three years and ten months between numerous positive findings. Typhoid bacilli were found in 1910 in the stool of a woman who had typhoid forty years before. She died three years later, and nine days after her death another inmate of the house developed typhoid for which she was evidently responsible. Some of the known carriers voided the bacilli only after taking castor oil, others only after aloin and podophyllin, while in two of the known carriers elimination of the bacilli could not be stimulated by any of the numerous purgatives tried.

In re-Pil. Cascara Comp. Robbins, Mild and Strong, see page x they contain no strychnia to poison, no Belladonna to dry the secretions or abnormally dilate the pupils—nothing to injure your patients. They are suited to all conditions requiring more or less alimentary stimulation. Given per se or with any other remedial agent. As anti-dyspeptic, aperient, laxative or cathartic they are always pleasant and thorough, and do not leave the alimentary tract in a state of atony. No unpleasant symptoms develop from continued use.

SOUTHERN MEDICAL SOCIETIES



MISSISSIPPI VALLEY MED. ASSOCIATION.

Annual Meeting at Cincinnati, Ohio.
October, 1914.

Henry Enos Tuley, M. D., Sec'y.,
705 S. Third St., Louisville, Ky.

D'Orsay Hecht, M. D. Pres. Chicago, Ill.

SOUTHERN SURGICAL and GYNECOLOGICAL ASSOCIATION.

Annual Meeting at Asheville, N.C.
Dec. 15-17, 1914-

W. D. Haggard, M.D., Sec.,
Nashville, Tenn.

John W. Long, M.D., Pres.
Greensboro, N. C.

SOUTHERN MEDICAL ASSOCIATION.

Annual Meeting at Richmond, Va.
Nov. 9-12, 1914.

Seale Harris, M.D., Sec.,
Mobile, Ala.

Stuart McGuire, M.D., Pres.
Richmond, Va.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

Annual Meeting at Charleston, S. C.
third Wednesday in Feb. 1915.

Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

Edw'd C. Register, M.D., Pres.
Charlotte, N. C.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Birmingham, Ala.;
April 20, 1915.

N. Baker, M.D., Sec.,
Montgomery, Ala.

B. B. Sims, M.D., Pres.,
Talladega, Ala.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Annual Meeting at Galveston, Tex.,
November, 1914r

F. H. Clark, M.D., Sec.,
El Reno, Okla.

S. S. Glasscock, M.D.,
Kansas, City, Mo.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Deland, Florida,
May, 14, 1915.

Wm. C. Little, M.D., Sec.,
Jacksonville, Fla.

F. Clifton Moore, M.D., Pres.
Tallahassee, Fla.

MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Macon, Ga.
April, 21-23, 1915.

Wm. C. Lyle, M. D., Sec.
Augusta, Ga.

W. B. Hardman, M.D., Pres.,
Commerce, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION

Annual Meeting at Newport, Ky.,
Sept. 23-25 1915.

Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.

W. O. Roberts, M. D., Pres.
Louisville, Ky.

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at Lake Charles, La.
April. 20-22, 1915.

R. DeBuys, M.D., Sec.,
1122 Maison Blanche Bldg. New Orleans,

Geo. S. Bel, M.D., Pres.
New Orleans, La.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Hattiesburg, Miss.
May, 11, 1915.

E. F. Howard, M.D., Sec.,
Vicksburg, Miss.

J. S. Ullman. M.D., Pres.
Natchez, Miss.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Greensboro, N. C.
June, 15, 1915.

L. B. McBrayer, M.D., Pres.,
Sanatorium, N. C.

J. A. Ferrell, M. D., Sec.
Raleigh, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at Albuquerque, N. M.
Oct. 5-7, 1914.

Dr. R. E. McBride, M. D. Las Cruces N.M.
Secretary.

H. B. Kauffman, Pres. Albuquerque, N.M.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Greenwood, S. C.
April, 20-22, 1915.

Edgar A. Hines, M.D., Sec.,
Seneca, S. C.

E. F. Parker, M.D., Pres.,
Charleston, S. C.

TENNESSEE STATE MEDICAL ASSOCIATION.

Annual Meeting at Nashville, Tenn.
April, 1915.

Olin West, M.D., Sec.,
Nashville, Tenn.

S. M. Miller, M.D., Pres.
Knoxville, Tenn.

MEDICAL SOCIETY OF VIRGINIA

Annual Meeting at Washington, D. C.
Oct, 27-30 1914.

P. A. Irving, M. D., Sec.,
Farmville, Va.

Stephen Harnsberger, M. D., Pres.
Catlett, Va.

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Charlotte Medical Journal.

A SOUTHERN JOURNAL OF MEDICINE AND SURGERY.

VOLUME 70
NUMBER 6

Charlotte, N. C., December, 1914.

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Table of Contents, Page 421

PITUITARY LIQUID

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2. Scarify with the point, drawing no blood.



3. Break the tube inside the bulb.



4. Remove end of capillary tube from bulb.



5. Break off the point at the file mark.



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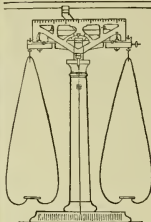
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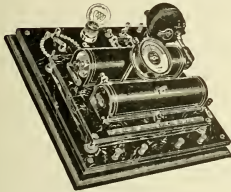
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The Charlotte Medical Journal

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DR. S. D. BOOTH.

Edited by Drs. D. W. and Ernest S. Bulluck,
Wilmington, N. C.

Dr. Samuel David Booth, of Oxford, N. C., was born in Mecklenburg County, Va., March 11, 1842. He is the eighth doctor of this family, having had four uncles, an older brother and two nephews in the profession.

He was educated at the common schools of Charlotte and Halifax Counties. His school days were shortened by the outbreak of the Civil War. He joined the Halifax Light Infantry, Capt. Grammer's Company, A-53rd Virginia Regiment, and was mustered in service at Richmond in April, 1861. This regiment was in the battle of Seven Pines and then in the Seven Days Battle below Richmond, including the terrible conflict at Malvern Hill. After this Dr. Booth was with his regiment in every battle fought by Gen. R. E. Lee in Virginia, Maryland and Pennsylvania, not receiving a wound or losing a day from duty until July 3, 1863, at Gettysburg. There as a member of Pickett's Division he was in that ever to be remembered charge and was shot down within twenty yards of the rock fence about which so much has been heard and read, having his left forearm crushed by a minie ball and at the same time receiving a flesh wound in the side. Upon his recovery he was transferred to Company G, Sixth Virginia Cavalry. He was captured at Spottsylvania C. H. and taken to Ft. Delaware, where he was confined until June 29, 1863.

Immediately after the war this recently discharged prisoner was prevailed upon by his elder brother, Dr. J. W. Booth, to locate at Tallyho, N. C., and study and practice medicine with him. His mother's estate, consisting mostly of negroes and confederate bonds, was wiped out as a result of the war and this necessitated his borrowing money with which to pursue his medical course. He attended lectures at the old Medical College of Virginia in 1866 and 1867. This college was then said to have the most able faculty south of Philadelphia.

He began the practice of medicine under adverse circumstances at a little hamlet called Knop of Reeds, about one-half way between Oxford and Durham in a rough, hilly country. As is the life of all country doctors, his life was full of hardships but his loyalty to his profession never allowed any obstacle to stop him when

called to see a case of any urgency. Often he was called in to the very worst cases and had to rely entirely on his own resources and judgment, being too far away from any other doctor to obtain consultation. However, he won the confidence of all, which is worth much to a young doctor who has to rely on his own efforts in difficult cases.

In 1880 he entered into partnership with Dr. P. W. Young and moved to Oxford. Dr. Young died five years afterwards, leaving the practice of Oxford and surrounding country as a heritage from this worthy young man. It was too much for any one man and overwork and the loss of sleep shattered his constitution.

Dr. Booth was elected Superintendent of Health of Granville County fifteen years ago and has filled the office continuously ever since. He was elected president of the State Medical Society at Charlotte, N. C., in 1896 and presided over that body at its regular annual meeting at Morehead City, N. C., in 1907. The subject of his address was Tuberculosis and the Law, upon which he was highly complimented by Dr. Howard Kelly of Baltimore, Md.

In 1882 and 1888 he attended post graduate courses of lectures at the Post Graduate School and Hospital at New York.

Though advancing years have made it necessary for Dr. Booth to diminish somewhat the scope of his practice, he manages to keep abreast with his county health work.

The Caring for Premature Infants *

By St. Geo. T. Griunan, M. D., Richmond, Va.*

Authorities differ as to the time to ligate the cord in premature infants. The premature infant certainly has a better chance for life if it can utilize in its own vessels all of the blood of the placenta. When the placenta is not previa a premature infant can receive oxygen through the maternal circulation if the placenta has not been detached. If the placenta previa causes the infant to be premature the infant is deprived of the chance of oxygenation through the maternal circulation.

Some of these infants do not respond to the various methods of producing artificial respiration. Four such aeration by omosis is well worth trying. Dr. W. E. Fitch (pediatrics Oct., 1910) in a most interesting

*Read at the meeting of the Medical Society of Virginia at Washington, October 28, 1914.

article on aeration by omosis has collected valuable data concerning this method of respiration. A notable case was mentioned by Dr. Fitch as reported by Dr. Seldon Stringer before the Florida Medical Association in April 1897 as follows: "I was called to a mutipera in the fifth month of gestation. The labor was rapid and uneventful, the child and placenta were all expelled at the same time without rupture of the membrane. There being no signs of life, I asked permission to take the specimen home. It was wrapped in clothes and placed in my buggy. Arriving home late at night (midsummer) I placed the package in my office until morning, when I proceeded to examine my specimen and found the infant living. The foetal circulation was carried on by aeration of the blood through the medium of the exposure of the maternal portion of the placenta to the atmospheric air."

From this experience Dr. Stringer was later enabled to resuscitate an infant by delivering the placenta and removing the blood clots.

Dr. B. F. Pendred reports similar experience (*British Medical Journal*, 1910). Dr. Fitch was able to resuscitate an asphyxiated infant by dashing cold water on the maternal side of the placenta, thus cleansing away the blood clots. The writer resuscitated one infant in this manner the infant being previa. In the middle of the last century it was a common practice to lay the placenta on the child's belly as a rational treatment of asphyxia. (*Pediatrics* 10, 1910; also *Encyclopaedia Medica*). Note the case of the lower animals where the placenta remains attached for a variable time. Hirst tells us that an infant born before the twentieth week can live but a few hours at most, born before the twenty-fourth week can live one to five days, born before the twenty-eighth usually dies. After the twenty-eighth week with proper care the infant will survive.

At the end of the twenty-fourth week the infant weighs 1.4 pounds and its length is 11 to 13.5 inches. At the end of the twenty-seventh week the infant weighs 2.5 pounds and length 14 inches. At the end of the twenty-eighth week the infant weighs 2.75 pounds with length 14.9 inches. It is not until the twenty-ninth week of gestation that the infant weighs three pounds.

The lungs and digestive organs are feeble. The breathing is shallow and irregular. Sleep is very lasting. The deficient thermal regulation characteristic of the new born is exaggerated in the premature. The loss of heat is rapid. In the case of the normal child the temperature falls and soon regains the normal.

In the case of the premature infant the temperature falls and continues to fall steadily unless placed in favorable environment. The less the weight the lower the temperature. After the initial drop the curve takes the form of a parabola, the longer without heat the flatter the curve. "The lack of physical thermo capacity taxes the chemical thermal regulation (increase in oxidation process). This leads to a change in alkalinity of the blood. Pflaundler found the blood of debilitated premature infants to be acid." (Pflaundler and Schlossman, Vol. 11, p. 84).

Comparatively few pediatricians now use the incubator. A fresher and better air than is obtained with the incubator is desirable. A padded crib or box with hot water bags on both sides or even under the infant supply heat quite successfully.

The electrotherm has been largely used and gives more uniform heat than the hot water bags which have to be constantly changed. The sides of the crib or box should not be too deep. The temperature in the box should be 85 to 90 degrees F. The temperature of the air in the room should be 72 to 77 degrees F. The infant should be protected with cotton. Pure air is very essential for the poorly developed lungs. Artificial heat is demanded where the three-hour temperature is subnormal. In cases where the temperature falls below 90 degrees F. all die.

Four or five hours after the infant is born the first bath is given. Warm olive oil may be used followed by water at a temperature of 100 degrees F. Subsequently sponge baths are better than tub baths, very fatty soaps being preferred. No more bathing should be done than is necessary. Dr. Budin recommends massage 2 or 3 times daily. Do not cleanse the mouth. More harm than good is done by trying to cleanse the mouth. For premature infants breast milk is better than any other kind of food. The infant is not usually able to nurse. When the infant cannot nurse the breast has to be pumped. Five or six hours after birth one drachm of breast milk with an equal amount of water may be given. The quantity is gradually increased. Some pediatricians give five feedings daily; some give fifteen. Ten feedings daily suit most cases.

When breast milk cannot be obtained whey is very useful. Whey gives a formula such as fat 1 per cent., proteid 1 per cent., sugar 5.5 per cent. Evaporated milk may be used. The infant may be fed with a large dropper or a Breck feeder. The bulb attached to the Breck feeder can be compressed and thus assist the infant in obtaining the milk, his powers of suction

being feeble. Stimulation before feeding may be essential. Slapping or a short bath is useful. Crede established the following mortality rates for premature infants. Infants weighing 2.5 to 3 pounds gave a mortality of 83 per cent.; those weighing 3 to 4.5 pounds, 36 per cent.; those weighing 4.5 to 5 pounds 11 per cent. Roger Durham (Archives of Pediatrics, June, 1912) reports a case of an infant weighing 1 pound and 12 ounces that lived eight months—dying of pneumonia.

The statistics of the Sloan maternity for premature infants is better when incubators are not used. After the first two weeks the mortality of premature infants compares very favorably with that of full term infants.

There is a type of small child and small placenta in no way debilitated. Premature infant constitute a large percentage of birth. Premature infants will not catch up with the full term infant during the first year. They may not catch up for two or three years. In later infancy the difference between premature and full term infants can hardly be recognized. The French national law forbidding parents to sleep with young infants is especially applicable to young premature infants.

It is well to bear in mind the expression of Tarnier: "Not all premature children are weaklings and not all weaklings are premature."

201 West Grace Street.

The Midwife Problem in Virginia.*

By W. A. Plecker, M. D., Richmond, Va.

Immense progress has been made during the past generation in preserving human life, and in banishing disease and suffering. Though much has been done already by physicians, surgeons, and public health men, the field is yet far from being completely worked.

My observations, as Registrar of Vital Statistics, have demonstrated to me the fact that Virginia has yet, through the medical profession and the Health Department untouched opportunities of preventing the death or disability of some of her valuable citizens. The particular one of these opportunities to which I wish to direct attention, at this time, is the prevention of the unnecessary deaths and injury, of mothers and infants in the practice of midwives during childbirth, from infection, ignorance and neglect. I regret that we are unable to answer accurately, as to the number of such deaths occurring annually.

We can tell you that there were reported to us for 1913, 144 deaths of mothers due to puerperal septicemia, and 264 more due to other accidents of pregnancy. That, however, does not convey an idea as to the proportion in the practice of midwives.

In the past, a large number of rural certificates of death has been reaching us, which occurred without an attending physician. Many of these either give no cause whatever of death, or give terms which are entirely misleading or valueless. We are now endeavoring to catch up with these, by scrutinizing the death certificates of women of the child-bearing age, from 15 to 45, and to learn by correspondence whether the deaths occurred during confinement, and if so, whether they were attended at any period by midwives. While many replies have been received from physicians and local registrars, confirming my suspicion, yet the proportion of the total is too insufficient to consider them of much statistical value.

Many puerperal deaths are also reported by physicians, who were called in to difficult cases, to deliver the children or to treat the mothers, previously under the care of midwives who had already infected them. The reports of 65 rural and 18 urban white deaths from puerperal sepsis is believed, in both cases, to be fairly accurate, as they are usually seen by a physician before death, even though delivered by a midwife. The 33 rural colored deaths, however, are known to be far from representing the true number, on account of the death of many being allowed, without even being seen once by a physician. The report of those deaths, as a rule, either fail to give any cause, or give an altogether misleading one, which does not even point to the existing puerperal conditions.

The report of the 28 city colored deaths from puerperal sepsis is nearer correct, as the certificates are required to show this cause. These 28 colored septic deaths, out of a total of 2,869 births, give about one death to 102 labors, while the 18 white urban deaths to 5,968 births give one to 331. I believe that this great difference of over three colored to one white death from puerperal fever, is due to the fact that the colored women are attended chiefly by midwives. Some of the white women also, who died, were delivered by midwives, which makes the case still stronger.

Assuming that the city death rate represents the true state rate, there were, therefore, in 1913 about 135 colored deaths from puerperal septicemia, mostly in the practice of midwives. There were in ad-

*Read at Virginia Medical Association in Washington, D. C., October 30, 1914.

dition, a considerable number of white doctors in the practice of colored and white women, bringing the total to 150 or more. The certificates of deaths from this cause do not show, except by inference, a much larger number of women who have died only after prolonged illness, which may leave results that are permanently disabling.

Further, they show the infant deaths and illnesses due to the inability of the mothers to nurse and care for them during the most important period of their existence. It is safe to say that these indirect deaths of infants would equal, if not exceed, those of the mothers.

This is not yet all; the death of many infants occur from eclampsia or septic infection due to dirty methods of caring for the child.

When Health Officer and Registrar of Vital Statistics for Elizabeth City County, I had a standard blank prepared, in which permits were made as to the presenting part. The records showed that in breech presentation the midwives had twice as high a rate as still-born children as physicians, due to the fact that they knew nothing about rendering assistance in the delivery of the after-coming head. The rate of still-births throughout the State from all causes is nearly twice as great in the practice of midwives as in that of physicians, amounting to an annual loss to the State of seven hundred infants.

Knowing thus that many mothers and infants lose their lives from the ignorance and presumption of midwives, particularly in the making of vaginal examinations, what remedy do we propose for it? I have received replies from physicians, to a circular letter recently sent out, denouncing the whole system of midwife practice, and the State for permitting it, while physicians are required to take a long and expensive training, and in the end pass a rigorous examination, before offering themselves for obstetrical practice.

It seems reasonable, but does not sum up the whole situation. It may be possible to handle the midwife problem with vigor, and require training and examination in the northern cities, and even in whole States, like Virginia and other southern States with a large negro population, the medical evil, for a long time, remain a necessary evil, with but little hope of great moral improvement in her methods. Regarding the nearly 8,000 midwives, whom we have listed, who attend on an average of less than three births each a year, and requiring them to take training and examination, is manifestly an impos-

sible task. To decree that they shall not render assistance to mothers, who for lack of means, or through the unwillingness or inability of physicians to respond promptly, are absolutely compelled to have some sort of aid, is manifestly unjust, and impossible of enforcement.

The solution which seems to me the most practical and likely to produce results, is to allow her to continue her practice without examination, but to forbid her absolutely, by legal enactment, to make examinations, unless she has had hospital training as a nurse, and is presumably able to practice aseptic methods. Owing to the custom of some to administer ergot in large doses before delivery of the child, thus doing much damage, she should be forbidden to administer any drug, except castor oil or other laxative.

We already have an organized force of nearly 1,300 local registrars of vital statistics, who are chiefly justices of the peace and physicians, through whom such a law can be enforced. Midwives should be required to register with the local registrar, who should issue without cost to them, a permit to practice, signed by the Health Commissioner, and if placed under the care of the Bureau of Vital Statistics, the State Registrar also. These permits should be countersigned by the local registrar, who should furnish to the Bureau of Vital Statistics, an accurate list of all, as they register. The permit should contain on it the law, brief but clear, which should be explained by the local registrar.

Registering each birth should also be a requisite to holding a permit. This simple requirement, which can be enforced, will, it is believed, prevent vaginal examinations, and many cases of infection and death. We have already endeavored to give midwives some instruction by means of a little four page folder. This instruction should be continued by the Health Department and the individual physicians, and at the same time the public should be educated as to the importance of these suggestions, and as to the risk of the employment of these dirty, untrained women in these emergencies. The Department of Health, and Bureau of vital Statistics, are able, with their present organization, to accomplish this with but little additional cost for printing, postage and labor. The same act can also include a clause requiring of physicians and midwives the use of a one or two per cent. solution of nitrate of silver in the eyes of all new born infants, for the prevention of blindness.

Further Report of Vaccine Therapy in Otolaryngology.

By Clifton M. Miller, M. D., Associate Professor of Rhinology and Otolaryngology, Medical College of Virginia, Richmond, Va.

The use of vaccines, both stock and autogenous, has come to be a recognized mode of treatment in many diseases and I have therefore found it worthy of your attention as a method of treatment in some oto-laryngeal cases.

I believe it to be a therapeutic procedure, the usefulness of which in the present stage of our knowledge accomplishes results more promptly than other treatments when applied by vaccines.

In weighing the results of what is a new or comparatively new form of treatment, we should not be led into the error that postulates a necessarily proper hoc.

The individual condition of the observer enters into calculation, as well as the undoubted psychological effect upon a patient of a new form of treatment which is explained to him and the results which are expected are outlined.

These factors can be eliminated only by large series of cases from many observers and final criticism and adjustment of the results obtained.

My own experience in the lines of various kinds includes some one hundred or more cases of which there is here given report on a number which are taken, not at random from the cases, nor to show the treatment in any particular line of cases, but were the first that came in the series.

The use of vaccines as a therapeutic agent may be, and probably is, but a step forward in our progress towards a fixed and certain treatment, and the next generation will undoubtedly reject this method as crude as this generation has rejected many of the methods of those who have preceded us.

The study of hormones and internal secretions may solve many of the questions of treatment which are now in doubt, but the utilization of every means of scientific investigation both clinical and laboratory in our possession brings us a step nearer the goal.

In my own work vaccines were never used as a substitute for other forms of treatment, but as an adjuvant in the treatment of conditions that were being dealt with.

They cannot take the place of, nor substitute themselves for drainage, hence their use does not obviate the necessity for surgical intervention nor is it advisable to use them alone in nasal conditions

when the pathological state is due to a deficiency of aeration and drainage of the nasal accessory sinuses. After proper drainage and aeration has been provided for, their use will hurry a recovery and reduce the amount of surgical procedure necessary to accomplish a cure.

These cases, except where noted in the case reports, were treated with stock vaccines containing staphylococcus albus, streptococcus, diphtheroid bacilli, diplococcus pneumoniae and pneumococcus catarrhalis.

The use of combined stock vaccines has been attacked as being unscientific and hence unjustifiable, but it seemed to me, particularly in nasal affections, that the great variety of the bacterial flora of the nose justified their use. The conditions of investigation of the patient's circumstance made it impracticable to use autogenous vaccines.

The use of stock vaccines and their failure in a given case does not indicate that this case may not be cured by autogenous vaccines nor can we mark it as a therapeutic failure of vaccine therapy until a carefully prepared autogenous vaccine has been used.

Report of cases follow.

Case No. 1.—C. A. B. Male. Married. Tinner.

History.—Saw him first March 30, 1913. No history pertinent to case except spoke of having cold for two weeks and frontal pain which was referred by him to eyes for past three days.

Present Symptoms.—Intense frontal headache on left side increased by movement of head and stooping forward. March 21st pain in left side relieved but continues abundant. Pain and tenderness over right frontal sinus. Tenderness on pressure over left frontal sinus, anterior wall and floor. Pus in middle meatus. Pain and tenderness relieved by shrinking middle turbinate with cocaine and adrenalin; return in two hours.

Diagnosis.—Acute purulent frontal and anterior ethmoiditis sinusitis.—March 31st, acute sinusitis right frontal.

Treatment.—March 24, 1913. Anterior end left middle turbinate removed. March 31, $\frac{1}{4}$ c. c. Catarrhal vaccine (combined). April 5, $\frac{1}{4}$ c. c. Catarrhal vaccine. Condition of right side improved. Lessened pain over right sinus. Left sinus discharging. April 10, right side improved. Left sinus discharging more slightly. $\frac{1}{2}$ c. c. Catarrhal vaccine. April 13, right side pain gone. Frontal

discharge both sides. 1 c. c. Catarrhal vaccine.

Conclusions.—Improved.

Case No. 2.—R. E. C. Age 28. Male. Married. Commission Merchant.

History.—Has not family history of importance. Discharge from right ear for about five years. Frequent attacks of coryza easily acquired.

Present Symptoms.—Discharge from right ear. Polypus in right ext. aud. canal snared March 2, 1913. March 15th, Grippe followed by O. M. P. A. in left ear Mr. incised. April 6th, Aural discharge, right, chronic. Left ear slight discharge. Small polyp presenting in Rt. canal. Catarrhal discharge from nose. April 20th, discharge much better.

Diagnosis.—O. M. P. C., right; O. M. P. A., left.

Treatment.—April 6, 1913, $\frac{1}{4}$ c. c. catarrhal vaccine injected in left arm. April 13, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines injected in left arm. Discharge from ears less. April 20, 1913, 1 c. c. catarrhal vaccines injected.

Conclusions.—Improved, but very irregular in attendance so result not satisfactory.

Case No. 3.—G. J. Age 28. Male. Married. Merchant.

History.—July, 1911, suffered from acute purulent frontal sinusitis, and ant. ethmoiditis. Anterior end left middle turbinate removed. Cure complete, no return of symptoms till April 30, 1913, when began having severe frontal pains.

Present Symptoms.—Frontal pains and tenderness over left frontal sinus. Discharge from left naso-frontal duct.

Diagnosis.—Acute purulent fronto-ethmoiditis.

Treatment.—April 7, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines (mixed). April 8, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines (mixed). April 9, 1913, 1 c. c. catarrhal vaccines (mixed). April 11, 1913, recovered.

Conclusions.—Cured.

Case No. 4.—C. C. C. Age 18. Single. Clerical worker.

History.—April 19, 1913. Started six weeks ago by having cold in head with large amount of mucous discharge which in spite of treatment persisted to present time. Health has been good up to that time and had not been subject to colds.

Present Symptoms.—Profuse nasal discharge. Frontal fullness and discomfort. Slight photophobia and difficulty in doing eye work. General malaise and discomfort. Inferior turbinates very boggy

and in contact with septum. Shrunk slowly under cocaine and adrenalin. Profuse mucous discharge. Mid. turbinates swelled and boggy. Tenderness on pressure over ethmoids.

Diagnosis.—Subacute catarrhal ethmoiditis and rhinitis.

Treatment.—April 11, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines injected. April 13, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines injected. April 15, 1913, 1 c. c. catarrhal vaccines injected. 1 c. c. at intervals of week. Five injections.

Conclusions.—Cured.

Case No. 5.—H. H. Female. Married. Housewife.

History.—Has had discharge from right ear since childhood with frequent attacks of severe pain over mastoid and entire right side of head. May 4, 1912, radical mastoid operation performed with relief of symptoms of pain but slight discharge continued from cavity.

Present Symptoms.—Slight discharge from right ear. Pus in ext. aud. canal. April 10, 1913, discharge thinner and less in amount. April 14, 1913, discharge much thinner. April 16, 1913, discharge much less.

Diagnosis.—Persistent suppurating sinus following radical mastoid operation.

Treatment.—April 8, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines injected. April 10, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines injected. April 14, 1913, 1 c. c. catarrhal vaccines injected. April 16, 1913, 1 c. c. catarrhal vaccines injected.

Conclusions.—No result. Bacteriological examination showed infection with bacillus pyocaneus. Vaccine made from this given without result. Attempt to sow bacillus bulgara also without result.

Case No. 6.—C. L. Female. Single. Hotel keeper.

History.—April 4, 1913, began with attack of grippe. April 5, intense pain in right ear. Ear began to discharge April 6, with relief of intensity of symptoms. Profuse discharge ever since.

Present Symptoms.—April 14, 1913, some pain in right side of head. Aural discharge—malaise. Profuse aural discharge. Small opening in Mt. No mastoid tenderness. April 15, 1913, patient better. Discharge less. April 16, very comfortable, discharge almost ceased. Mt. improved in appearance.

Diagnosis.—O. M. P. A.

Treatment.—April 5, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines injected. April 7, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines injected. April 9, 1913, 1 c. c. catarrhal vaccines injected.

Conclusions.—April 12, 1913, cured.

Case No. 7.—M. E. Male. Single. Clerk.

History.—Asthma for several years. Deviated nasal septum operated by submucous resection, November 25, 1912. April 2, 1913, right middle turbinate removed.

Present Symptoms.—Asthma; mild attacks when weather is damp. Profuse nasal discharge. Nasal discharge. Ethmoid congestion. April 17, 1913, no asthmatic seizure. Nasal congestion and discharge less. April 20, nasal symptoms better. No asthma since first injection.

Diagnosis.—Chronic catarrhal ethmoiditis.

Treatment.—April 15, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines. April 17, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. 1 c. c. at intervals of week, four injections.

Conclusions.—Improved.

Case No. 8.—E. B. L. Male. Single. Student.

History.—For several years has taken cold very readily. Nose feels stopped. Profuse mucous discharge. Anterior end right middle turbinate removed about a year ago.

Present Symptoms.—Profuse nasal discharge. Some feeling of stuffiness in nose and frontal pain. Congestion in ethmoid region. Discharge. April 17, 1913, congestion less. Discharge unimproved.

Diagnosis.—Chronic catarrhal ethmoiditis.

Treatment.—April 15, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines injected. April 17, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines injected. 1 c. c. at intervals of week for five injections.

Conclusions.—July 5, 1913, reports himself cured.

Case No. 9.—R. R. C. Age 25. Male. Married. Electrician.

History.—Repeated colds for several years past with profuse nasal discharge. Nasal spur has been removed from nose and left middle turbinate. Adenoids and tonsils have been removed. Is a trombone player and profuse secretion prevents use of this instrument.

Present Symptoms.—Profuse nasal discharge. Obstructed nasal respiration and frequent colds. Occasional frontal headaches. Hyperplasia of nasal mucous membrane. Slight deviation of septum to the right. Nasal chambers contain large amount of muco-purulent secretion.

Diagnosis.—Chronic catarrhal fronto-ethmoiditis. April 14, 1913, $\frac{1}{4}$ c. c. ca-

tarrhal vaccines. April 16, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. April 23, 1913, 1 c. c. catarrhal vaccines.

Conclusions.—Improved.

Case No. 10.—H. M. C. Age 31. Male. Married. Railway flagman.

History.—Has been having repeated attacks of rhinitis for past several years which improved under treatment but the nasal chambers remained irritable and the discharge was rather thick. General health good.

Present Symptoms.—Thick mucous expectorations. Cough. Feeling of fullness in nose when lying down. Hyperplastic conditions of inferior turbinates. Congested and thickened condition of mucous membrane in naso-pharynx.

Diagnosis.—April 16, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines. April 23, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. April 27, 1913, 1 c. c. catarrhal vaccines.

Conclusions.—Improved.

Case No. 11.—W. P. Age 15. Male. Single. Farmer.

History.—April 17, 1913, had measles eight weeks ago. Earache followed by discharge during convalescence. Four weeks ago discharge ceased and post-auricular swelling appeared. Swelling subsided in two weeks. Small amount discharge with temporal pain ever since. Pain ceased this afternoon.

Present Symptoms.—Discharge from right ext. aud. canal. Small granuloma ant. portion right Mt. Thick discharge in small amount.

Diagnosis.—O. M. P. A.

Treatment.— $\frac{1}{4}$ c. c. catarrhal vaccines injected.

Conclusions.—Not heard from.

Case No. 12.—P. B. C. Age 24. Female. Married. Housewife.

History.—In January, 1913, began to have cough with free expectoration with pain in forehead, nose and back of head. Pains worse in morning on arising.

Present Symptoms.—May 5, 1913, frontal pains and heaviness worse upon arising in morning. Free expectorations, nasal obstruction. Congested mucous membranes. Inferior turbinate boggy, contact with septum. Profuse muco-purulent discharge.

Diagnosis.—

Treatment.—May 4, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines injected. May 7, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines injected. May 13, 1913, 1 c. c. catarrhal vaccines injected.

Conclusions.—Improved.

Case No. 13.—G. B. Age 39. Male. Married. Physician.

History.—Nothing particularly bearing on this present trouble.

Present Symptoms.—Persistent nasal discharge aggravated by change in the weather. Frontal heaviness and discomfort increased at hour of rising in the morning. Congested mucous membrane, septum deviated to the left and contact with middle turbinate, large amount of mucous in nasal chambers.

Diagnosis.—Chronic catarrhal ethmoiditis.

Treatment.—May 1, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines. May 3, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. May 5, 1913, 1 c. c. catarrhal vaccines.

Conclusions.—Improved.

Case No. 14.—C. M. S. Male. Single.

History.—Nothing significant except symptoms of eye strain.

Present Symptoms.—In spite of correction of refractive error he continues to have frontal pain dullness, with difficulty of mental concentration. Engorged middle turbinate bone and ethmoid congestion. Increased nasal secretion.

Diagnosis.—Chronic catarrhal ethmoiditis.

Treatment.—May 14, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines. May 16, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines.

Conclusions.—Improved.

Case No. 15.—R. Age 10. Male.

History.—Had discharge from left ear about four years. August, 1911, operated on for removal of hypertrophied tonsils and adenoids, but discharge from ear continued.

Present Symptoms.—Discharge from left ear. Profuse muco-purulent discharge from left ear occasional odor, perforation in lower part of drum.

Diagnosis.—O. M. P. C.

Treatment.—Has been on antiseptic treatment two years without result. May 16, 1913, $\frac{1}{8}$ c. c. catarrhal vaccines. May 18, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines. May 15, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. June 1, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. June 8, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. July 6, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines.

Conclusions.—July 6, 1913, discharge almost ceased. Great improvement. Examination showed pure culture colon bacillus from which vaccines were prepared and used without further benefit to the patient.

Case No. 16.—C. Age 10. Female.

History.—Has had discharge from both ears since two years of age. Very pro-

fuse and foul odor. December 5, 1912, tonsils and adenoids removed which resulted in some lessening of the discharge.

Present Symptoms.—Discharge from both ears profuse and foul. Aural discharge. Perforation of both membrane tympani.

Diagnosis.—O. M. P. C.

Treatment.— $\frac{1}{2}$ c. c. catarrhal vaccines injected at intervals of one week for six injections.

Conclusions.—Discharge ceased, apparent cure.

Case No. 17.—J. N. R. Age 60. Male. Married. Farmer.

History.—Four months ago had attack of earache followed by discharge from ear which has persisted in spite of irrigation and cleanliness.

Present Symptoms.—Discharge from ear and some tinnitus. Aural discharge. Large central perforation of membranae tympani.

Diagnosis.—O. M. P. C.

Treatment.—June 7, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines. June 19, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. June 12, 1913, 1 c. c. catarrhal vaccines. Local use of tincture of Benzoin Comp.

Conclusions.—Cured.

Case No. 18.—E. S. J. Age 30. Male. Married. Express messenger.

History.—Acute frontal pain and profuse nasal discharge for several days.

Present Symptoms.—Headache increased on bending forward. Profuse nasal discharge, left side. Malaise for several days. Discharge from under middle turbinate region. Nasal mucous membrane inflamed and boggy. Tenderness on pressure over left frontal sinus. Left frontal sinus dark on transillumination.

Diagnosis.—Acute purulent frontal sinusitis.

Treatment.—Removed left middle turbinate. Injected 1 c. c. catarrhal vaccine at intervals of four days for four injections.

Conclusions.—Pain and tenderness removed by operation. Discharge persists. Very little result from vaccines. Culture shows staphylococcus infection. Auto-genous vaccines now being used. Greatly improved.

Case No. 9.—H. W. B.—Age 49. Male. Married. Physician.

History.—Very easy to take cold which is always accompanied by frontal discomfort. Recovery usually slow.

Present Symptoms.—Profuse nasal discharge with frequent attacks of sneezing. Mucorpurulent nasal discharge. Irregu-

lar septum. Mucous membrane red and boggy.

Diagnosis.—Chronic catarrhal fronto-ethmoiditis.

Treatment.—June 8, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines. June 11, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. June 15, 1913, 1 c. c. catarrhal vaccines.

Conclusions.—Great improvement.

Case No. 20.—F. Age 3. Female.

History.—For the past several months has had profuse nasal discharge with eczema of the skin of upper lip and face in the neighborhood of nose, also blephoritis, matting of both eyes.

Present Symptoms.—Photophobia. General discomfort. Muco-purulent nasal discharge. Eczema of face.

Diagnosis.—Purulent rhinitis.

Treatment.— $\frac{1}{4}$ c. c. catarrhal vaccines injected at intervals of four days for five injections. Nasal cleanliness.

Conclusions.—Improvement followed first injection, but was not maintained. Bacteriologic examination showed staphylococcus infection for which autogenous vaccines were made and used. Cured.

Case No. 41.—N. L. B. Male. Laborer.

History.—June 10, 1913, always well till present attack. Has had pain in ear for past ten days.

Present Symptoms.—Malaise. Earache. Mastoid tenderness. Membrane tympani red and boggy.

Diagnosis.—O. M. P. A.

Treatment.—Mt. incised. Discharge profuse. Irrigation of ear canal and hot applications to mastoid.

June 18, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines. June 20, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. June 23, 1913, 1 c. c. catarrhal vaccines.

Conclusions.—June 29, 1913. Recovered.

Case No. 22.—M. W. Age 44. Female. Single. Saleslady.

History.—Nothing significant until last November when she had frequent attacks of sneezing and persistent nasal obstruction.

Present Symptoms.—Profuse nasal discharge, sneezing, a feeling of itching in the throat. Mouth breathing. Phinorrhoea. Nasal congestion with bogginess of turbinates. Inferior turbinates in contact with septum.

Diagnosis.—Chronic catarrhal ethmoiditis.

Treatment. Local astringents and cleansing sprays with general tonic treatment. Little benefit. May 25, 1913, $\frac{1}{4}$ c.

c. catarrhal vaccines. May 27, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. May 29, 1913, 1 c. c. catarrhal vaccines. 1 c. c. catarrhal vaccine at intervals of one week for four injections beginning June 8th.

Conclusions.—Cured.

Case No. 23.—E. H. Female. Married. Housewife.

History.—Has been subject to hay-fever for ten years but free from attack August, 1911. Had attack August, 1912.

Present Symptoms.—May 29, 1913, difficult nasal breathing. Some cough, considerable expectoration in the morning. Nasal discharge considerable. Congestion middle turbinates. Muco-purulent discharge from nose. Middle turbinates in contact with septum.

Diagnosis.—Chronic ethmoiditis.

Treatment.—May 29, 1913, $\frac{1}{4}$ c. c. catarrhal vaccine. May 31, 1913, $\frac{1}{2}$ c. c. catarrhal vaccine. June 2, 1913, 1 c. c. catarrhal vaccine.

Conclusions.—Nasal conditions much improved.

Case No. 24.—J. L. A. Age 33. Female. Married.

History.—Sixteen years ago was operated on, first for nasal polypi, operated on again four years ago.

Present Symptoms.—May 6, 1913, nasal obstruction, purulent discharge. General malaise. Loss of appetite. Nasal polypi, both sides. Purulent discharge from nose.

Diagnosis.—Chronic purulent ethmoiditis with nasal polypi.

Treatment.—May 13, 1913, nasal polypi and portion of middle turbinate, right side, removed.

June 5, 1913, nasal polypi and portion of middle turbinate, left side, removed.

July 12, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. July 15, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. Vaccines used, 1 c. c. every week for three months.

Conclusions.—Very great improvement.

Case No. 25.—J. D. H. Age 50. Male. Married. Florist.

History.—June 3, 1913, for past several years has been subject to cold in head with profuse nasal discharge. Has had several asthmatic seizures at long intervals lasting about three hours.

Present Symptoms.—Difficult breathing, nasal and frontal discomfort, heaviness in forehead, sneezing, profuse muco-purulent nasal discharge. Septum deviated slightly to left, high up. Congested nasal mucous membrane. Middle turbi-

nate in contact with septum on left side. Profuse secretion.

Diagnosis.—Chronic catarrhal ethmoiditis.

Treatment.—June 3, 1913, $\frac{1}{4}$ c. c. catarrhal vaccines. June 6, 1913, $\frac{1}{2}$ c. c. catarrhal vaccines. June 9, 1913, 1 c. c. catarrhal vaccines. Beginning June 19, 1913, 1 c. c. catarrhal vaccines at week intervals for four injections.

Conclusions.—Cured.

Case No. 26.—J. G., Bristol, Va. Seen first June 8, 1913. Male. Married. Laborer.

History.—Has had discharge from right ear with dizziness for year or two.

Present Symptoms.—Dizziness. Deaf. Examination showed discharge from right ear with slightly reduced hearing. Left ear completely deaf from O. M. C. C. Fistula test in right ear negative. On account of deafness in left ear patient was advised against radical mastoid operation; rather first try use of autogenous vaccines.

Diagnosis.—O. M. P. C. right. Examination showed infection of staphylococcus albus from which vaccines were made.

Treatment.—Irrigation of tympanic recess and injection of vaccine containing 50 million bacteria every third day. Much local reaction. General reaction slight.

Conclusions.—Patient much improved while under treatment but had to return to his home and the condition returned in about three months. I believe that if he could have continued treatment he could have been cured permanently.

Case No. 27.—Mrs. J. R. Seen first June 18, 1913. Female. Married.

History.—Always healthy until about four months ago developed pain in right side of face which was attributed to abscess of tooth infecting antrum. Two teeth were extracted and antrum bored into. These openings have been kept open and antrum irrigated through them without result.

Present Symptoms.—Pain and heaviness over right cheek. General discomfort and malaise. Two openings through alveolar process leading into right antrum. Pus discharges freely on removal of plugs from these openings.

Diagnosis.—Examination and culture show infection of streptococcus and staphylococcus.

Treatment.—Vaccines made from combined streptococcus and staphylococcus injected beginning with 20 million increasing to 50 million every third day.

Reaction general and local marked. At the end of three weeks another bacteriological examination showed pure staphylococcus from which vaccines were made. Anterior end of middle turbinate was removed before injections were begun. September 12th both openings closed. Antrum clear. An injection of 50 million was given every third day. While injections were being used irrigations were continued.

Conclusions.—She remains cured to this time.

Case No. 28.—L. Age 6.

History.—December 11, 1913. Discharge from right ear with occasional pain and headaches for past three years. No personal family history of significance.

Present Symptoms.—Profuse discharge from right ear of very foul odor. Aural discharge lower part of Mt. destroyed. Child pale and anemic looking. Examination of discharge gives pure culture of colon-bacillus.

Diagnosis.—O. M. P. C.

Treatment.—Autogenous vaccines prepared and given at intervals of four days for six weeks.

Conclusions.—No benefit to aural discharge. General physical condition improved.

Case No. 29.—E. S. B. Age 36. Male. Single. Clerk.

History.—March 29, 1914. No significant personal or family history except discharge from both ears for past ten years.

Present Symptoms.—Discharge from both ears sometimes mucous in character and sometimes purulent, attended with slight odor. Discharge from both ears Mt. both sides totally destroyed. Eustachian tubes open. No carious bone discovered by probe. Examination shows presence of staphylococcus.

Diagnosis.—O. M. P. C., bilateral.

Treatment.—Autogenous vaccines injected every fourth day, 500 million to a dose.

Conclusions.—Improved.

Case No. 30.—Mrs. L. R. C. Age 25. Female. Married. Housewife.

History.—July 21, 1914. Inability to use her eyes for past three months on account of pains and inflammation. Discharge from both eyes and photophobia constant, though sometimes less marked. No other history of significance. Had been under treatment during entire time of sickness without improvement.

Present Symptoms.—Conjunctivae

congested. Lids thickened. Profuse purulent discharge from eyes. Suffers, she says, with constant cold in head. Congested conjunctivae and lids. Examination of nose showed ethmoid region swelled and a profuse muco-purulent discharge. Bacteriological examination of the discharge from nose and eyes shows, *staphylococcus albus*.

Diagnosis. — Sub-acute ethmoiditis with secondary involvement of conjunctivae.

Treatment.—Cleansing nasal chambers and astringent applications to conjunctivae. Autogenous vaccines used every fourth day for three weeks.

Conclusions.—Cured.

These cases all occurred in my private practice and practically all were under observation a sufficient length of time to note carefully both immediate results of the administration of the remedy and their ultimate effect upon the condition under treatment. Reaction was sometimes almost unnoticeable yet I could not note any direct connection between the amount of reaction and the response to treatment. Especially was this true in regard to the stock vaccines.

In all cases where autogenous vaccines were used the reaction was more marked than with stock, even in the same patients.

The question is often asked "Will the use of vaccines confer immunity to subsequent similar attacks?" This could hardly be expected except in cases of self-limited diseases and even in these cases the effect is restricted, as we know diphtheria and other diseases have an antitoxin that is limited as to the length of time during which it confers immunity.

3 West Grace Street.

The Medical Profession and the Public.

By Charles S. Webb, Ph. B., M. D., Bowling Green, Va., President Caroline Co. Med. Society, Formerly Prof. Practice Med. in Southern Medical College.

A few years ago a question was going the rounds of the press seeking the best definition of greatness. The answer which was considered the best was this: "If you ask me who is the greatest man, I would say the *best* man; and if you ask me then who is the best man, I would say he who has done most for his fellow-man." This is in exact accordance with the answer given by the Master to the ambitious James

and John who wanted to sit the one on his right hand and the other on his left in his kingdom, "he that would be greatest among you let him be the servant of all." Tried by this standard I think I shall not be claiming too much if I accord first place in the ranks of greatness to the medical profession. Doubtless we all remember the false standards of greatness which were set up for us in our early school days—military heroes mostly—men who slew thousands of their fellow-men, men who drenched the fields in blood for plunder, for ambition, for selfish aims. Alexander, and Caesar, and Hannibal, and Napoleon, and others of that class, world heroes, men whose names live in history. And even now, almost every schoolboy knows about Napoleon who shot like a meteor of flame across the continent of Europe, spreading death and destruction in his path—but how many know about Pasteur, that other Frenchman, who in his triumphant grapple with death in its most hideous form, saved and is yet saving more lives than all that Napoleon destroyed? Contrast these two Frenchmen and which one, think you, is more worthy of the homage of mankind? Cross over to Germany and contrast Frederick the Great, or the iron chancellor, Bismarck, or the present German Emperor, with the modest and unpretentious Behring whose wonderful contribution to science has gladdened so many mothers' hearts! A few years ago when Edward VII was crowned King of England, The New York Sun said in an editorial notice, "the coronation today was not the coronation of Edward VII, it was the coronation of *Joseph Lister* out of whose brain came the idea of aseptic surgery which saved the very life of the King himself, for without that discovery he would have died under a recent surgical operation, if indeed any operation could have been performed at all." But why multiply examples when we have them all around us? When Aeneas brought the sacred fire from Troy it was kept alive by the vestal virgins in that vaulted temple that stood upon the forum at Rome. So, the medical profession has been guarding the sacred fires of the life and health of the nation. Is there any better way to enrich a country than to preserve the lives and health of its people? It has been said that he who causes two blades of grass to grow where only one grew before is a public benefactor, but how about one who causes two men to live where only one lived before? Yea, not two men, but thousands of those who are the hope of the nation? This subject is so vast that it almost staggers one to contem-

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plate it. Who can estimate what the public, the State, the nation, the nations of the earth owe to the medical profession! Think of those great scourges of the human race, typhoid fever, diphtheria, smallpox, hydrophobia, bubonic plague, yellow fever, and other great enemies of life. We stand aghast at the horrors of war because war is so realistic, but these silent destroyers have been sweeping off more than all the wars. Who stayed them in their progress? Who stood up against them and fought a hand to hand fight for the lives of the people? Think of what these horrible diseases used to do and what they do now. Typhoid fever will soon be a thing of the past; diphtheria has lost its terrors; and so of many of these scourges which threatened to exterminate the race. The surgeon's skill has given new life to thousands who were under the bonds of affliction.

Some of the most formidable and dreadful of our enemies are yet defying all our science, and yet, even while we are here some patient toiler is in his laboratory with test-tube and microscope on the trail of pneumonia, tuberculosis and cancer. Thus far these have eluded capture, they are yet at large, but I venture to predict that it will not be long before these most deadly enemies of the race will be under the control of science. Have we any part in this great matter? Yes, surely. One man invents the machine, another puts it in motion. One discovers the remedy, another takes the field to apply it, so that all, even the humblest members of the profession have part in this onward march.

The public is, therefore, not only *reaping* much from the medical profession, but the public *expects* much. Time was when the doctor's business seemed to be only to heal or to attempt to heal the sick. Now the doctor's business seems to be to keep the people well. Sanitation, hygienic measures, prophylaxis, immunity, the air is full of it. We have made war on flies, mosquitoes, rats, and every disease carrier known or suspected, and we have even invaded the kitchen to tell people why cooking is important, how to make food appetizing, how cooking aids digestion. We have even essayed to teach in our health bulletins the fundamentals of bread-making—all this to ward off dyspepsia, indigestion and all the horrors of nightmare. And all these things we are doing not for pay in dollars and cents, not for fame, but for pure love of the work, and that we may have a good conscience, if nothing more. Danté in his weird and graphic description of the infernal re-

gions says: "Abandon hope all ye who enter here;" so, by a slight paraphrase it may be said to those who enter the medical profession, "abandon *self* all ye who enter here." I have said that the public expects much of the medical profession. It is also true that the public is more ready than ever before to listen to the teaching and to heed the warnings of the profession. The public is not so much disposed to look upon us as empirical practitioners, of the hit or miss variety. I remember that a few years before the death of our distinguished and beloved brother, Dr. Hunter McGuire, an epidemic broke out in Richmond and Dr. McGuire advised the people to boil the drinking water—and they laughed at his advice. But now, not only the people of Richmond but in the humblest quarters of the State the people will very promptly heed such advice. It used to be considered that a fly was very useful, as a scavenger of the air. I met a gentleman not long ago in one of our Virginia cities who said that he remembered very well when children were taught that it was cruel to kill a fly. How different now! I have recently read an editorial in The Atlanta Constitution entitled, "The Plague Fight Won," from which I quote: "The Southern people and the people of America can well afford to turn aside for a moment from embattled Europe to pay tribute to the city of New Orleans, the Federal Government and science for the manner in which they have grappled with and triumphed over one of the deadliest of diseases, the bubonic plague. It is due to New Orleans to say that when the alarm broke out the people did not stam pede. They had seen science work its practical miracles in the matter of exterminating yellow fever. They were told that science could do the same thing with bubonic plague. The same men, or their associates, who had conquered yellow fever in New Orleans and Havana and Panama, made these promises to New Orleans and New Orleans believed them." But the public seems to be expecting us to go further yet. A few months ago an editorial appeared in The New York World from which I quote these words: "Unless the physicians and social workers do something to eradicate the opium habit, the cocaine habit and the alcohol habit our race and nation are doomed." And this from a great New York daily. You will notice that physicians are put first, "unless the physicians and social workers," showing that in these times of enlightenment and progress we of the medical profession are expected to look after questions of national decay and moral degeneracy. Truly, the life of a nation depends on the physical,

mental and moral health of its people. A few years ago the people went wild on the subject of education, that is education in the schools according to the most advanced academic curriculum. Now the people are beginning to see that while this sort of education is much to be desired, yet there is another sort which has been too long neglected, namely, how to preserve the life and health of the nation. For, as the love of life and the fear of death are inherent principles, so the science which has for its object the preservation of life and health is most worthy of the attention of mankind.

But shall the public receive all and give back grudgingly or with sparing hand? Should not the principles of reciprocity apply here? I would not say that the public is ungrateful. I would not say that the public is unappreciative. But I will say that in my judgment the medical profession is, for the most part, composed of men who are the most patient and unselfish of any people on earth. I suppose we have all had our ups and downs with individual patients, but we did our best for them, whether they were worthy or not. No doubt each one of us has a list in his memory and their names also inscribed in a book—some who were grateful and appreciative, and others who used us for all they could get out of us and then cast us aside on the slightest pretext. I speak not of these individual cases, but of the public as a whole. And what may we rightfully expect from the public as a whole? There is only one way in which the public as a whole can show its appreciation of the medical profession. The people *make the laws*, and the laws have not always been such as to help us in our work, but rather to throw obstructions across our pathway. Within the memory of some of you now before me the law made no provision for the dissecting room, and hence grave-robbing was the only way by which we could get material for the study of anatomy, and *that* was against the law. But the same law made us liable to a suit for malpractice if a fractured bone was not properly set, or if some other professional act was not accurately and scientifically done. You see, they made it unlawful for us to study anatomy and then held us accountable for not being well versed in anatomy! The State has outgrown that a little now, and yet there are many other absurd and unjust things that the State has done. The State now requires a diploma from an accredited medical college, then the passing of the State examining board, then a license, for which until now we had to pay, but at the same time the State has allowed any man not claiming to

be a physician to sell all sorts of nostrums on the street, claiming to cure anything from chilblains to cancer. A man once came to my office and showed me two little buckskin bags containing some kind of powder and said he had just paid one dollar apiece for them from a man who was selling them on the street, claiming that if worn around the neck they would ward off almost any disease. Now the law had already affixed a penalty against any one, except a licensed physician, who prescribed for or announced a readiness to heal or to attempt to heal any disease of mind or body. Then why did not the law apply to the man who was selling his nostrums? Because they had left a loophole for the sale of proprietary medicines. The law of 1912 corrects this and makes the penalty apply to "persons not pretending to be physicians" who offer for sale on the streets or other public places remedies which they recommend for the healing or curing of disease—but in the same section we read: "Nothing in this act shall be construed to affect in any way the *manufacture or sale of proprietary medicines* by licensed druggists of this State." You see, therefore, that a licensed druggist has the right under the law to manufacture and sell a proprietary medicine, with the name of the disease for which it is intended, the dose and directions all printed on the label, and yet in the same code it is declared to be unlawful for any one *except a licensed physician* to prescribe for the sick. Doesn't that seem to be a little twisted? And yet, such is the reading of the law.

In 1908 the law provided that physicians regularly licensed might have the privilege of supplying their patients with such medicine as they might deem proper, and then gave the pharmacy board the power to grant an annual permit to any regularly licensed physician in a town of one thousand or less, and in rural districts, to sell and compound medicine, etc. And the pharmacy board, by authority of the law, decided that they would grant only one such license in any given locality, and then only provided there was no registered pharmacist doing business in such rural district or town. Would you call that monopoly or not? This was in 1908, but in 1910 the legislature substituted *shall for may* and physicians for physician, so that the law now reads: "The board of pharmacy shall grant an annual permit to any physician or physicians regularly licensed under the laws of Virginia to compound and sell medicines, etc." That is better, but you have to go to the pharmacy board to get permission to sell a few drugs in a rural district. Our law-makers seem to have this sort of a theory: That after a young man

attends a medical college for four years and graduates from the same, then passes the State examining board, having been drilled and examined and passed in chemistry, in materia medica, in therapeutics, in toxicology, having been declared competent to write prescriptions and therefore to know and be familiar with incompatibles both physiological and chemical, and in all respects fit and proper to be turned loose on the innocent and unsuspecting public—yet such a man is not fit to be trusted to compound or to sell any medicines (so called) to any *except his own patients* if there should be any foolish enough to trust him. All others are warned by our law-makers to steer clear of him until he has been O.K'd by the State board of pharmacy! And all this, they say, is done in the interest of the dear people, in order that they may be *protected* from the incompetent and unworthy.

Why is it that our laws have been so unjust and seemingly so absurd and contradictory? It is because we of the medical profession have not been banded together for self-defense. It is because we have not been banded together to demand such legislation as will help and not hinder us in our work. It behooves us to study law sometimes as well as medicine, and we ought to be in politics enough to know whether our representatives are friends of the medical profession. The time allowed will not permit the consideration of other points in our State laws, nor the national legislation which might help us in our work. We are not asking anything for ourselves as such, but only for the profession, for what it has done and for what it proposes to do for the human race.

Standardization of the Surgeon Study of end Results.*

By G. Paul LaRoque, M. D., F. A. C. S. Surgeon to Memorial Hospital; Associate Professor of Surgery, Medical College of Virginia, Richmond, Va.

Standardization of the medical schools of the nation is about finished. Standardization of hospitals is slowly but surely being accomplished.

Standardization of surgery is the primary purpose of the American College of Surgeons. Each practitioner may do his part toward the accomplishment of this lofty purpose through truthful records and legitimate publicity of his own work and through painstaking research, critical study and honest efforts to improve the end results of his personal labor. It is now the

rare exception for the operation to be as dangerous as the disease; and the public is quite aware that when "the operation was successful but the patient died," error has resulted not from surgery, but from delay (sometimes hurry) in dealing with handicapped victims of advanced pathology, or has occurred at the hands of "doctors who operate." Modern operative technique based upon rigid cleanliness mental and manual gentleness, early recognition proper and prompt treatment of pathology, has lowered the mortality of the most formidable operations to a figure much lower than the risk incident to the office of President of the United States.

Successful results in the sense that the patient recovered certainly are the rule. Satisfactory results are largely a question of who and what demands were satisfied. Perfect results are what we want. Judgment of perfection should be based upon rigid and critical study of actual end results of surgical treatment upon the disease and upon the patient. Hospitals must supply the public with the data upon which to base their decision as to which hospital to enter. The data shall consist of true records of actual results or treatment, the end results.

Individual surgeons must adopt similar principles to become fittest for survival in the struggle for existence. Since surgical operations have become dinner table conversation, honest publicity to legitimate inquirers, of the end results of individual surgeons is demanded. The time will come when hospitals will demand of their staff members, and the general practitioner and public of their surgeons, proof of their right to hold their positions or to expect support. This proof must be more real than that afforded by social distinction, political manipulation, or religious affiliation; it must be based upon end results. It is of less concern to a patient about to be operated upon, to know the architectural structure or geographical location of the hospital, how many assistants are employed by the surgeon, or how much is the value of the surgeon's social and political influences, than:—What was the matter? Did he find out before operation? Are his patients cured? Was convalescence unattended by even slight complications? How long and how expensive was the treatment? Was the end result perfect to the patient or satisfactory only to the surgeon.

E. A. Codman has given a practical illustration of the feasibility of standardizing the hospital and work of a surgeon upon the basis of an end result system. This work will before long be recognized

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as the beginning of true clinical science applied to practical surgery, and aimed at perfection of efficiency as determined by the product.

To effect improvement the first step is to make and keep proper and complete records of the details of each case. This makes it possible for us to take at regular intervals, an inventory of stock and to study the products of our work. We must admit and record lack of perfection and analyze causes of failure. We may then proceed to effect improvement by enforcing control of those causes admittedly controllable, and by finding some method of controlling those causes which seem now to be beyond our control. It is the error of which we are ignorant, that we persist in carrying with us. A critical inventory of end results will inform us of facts and stimulate efforts at improvement. Through systematic and rigid self criticism we shall improve results of diagnosis and treatment eliminating not only mortality, but such "little things" as stitch infection, post-operative backache, and other pains, tympany, vomiting, cough etc, not prohibitive of ultimate success, but distressing to the patient, retardatory to convalescence, partially invalidizing for variable periods of time, and followed by incomplete cure of disagreeable sequelae.

Nor should we permit our human conceit to blur our vision of truth, and desire to play to the grand stand to strangle our honesty. Defects must be seen and felt to be corrected. The victims of doctors mistakes may be buried, but the causes of the mistakes should be discovered and kept constantly before us for correction. No surgeon is better than his end results. These are not best if they can be made better.

A report of all so-called unusual cases scattered in single or few numbers among thousands of surgeons, would be placed at the disposal of others for study. If all such cases were reported, many of these unusual cases will be found to be quite usual. Indeed it is even now sometimes, noted that occasionally it is the surgeon, rather than the patient and pathology, that is unusual or even remarkable.

May our lack of perfection give us more concern than our successes, may we so see and correct mistakes that we shall make one less "insignificant" error each day. May we attain the same perfection of results in each individual patient as we would have obtained for us, if we ourselves are to submit to operation for the same trouble. May satisfactory results be spelled with

the same letters in the same arrangement as perfect.

The practice of individual standardization involves problems presented by questions quite natural to every individual case. What was the trouble? Did we find it our beforehand? Did the patient get entirely well? Was convalescence and the result perfect? If not, why not? Was the lack of perfection the fault of the surgeon, the disease or the patient? What can we do to prevent similar lack of perfection in the future?

It has always been the purpose of clinical surgeons to practice their art for qualitative rather than quantitative results, and to this end we must individualize each case and concentrate our best efforts upon each patient separately, rather than summarize the average percentage of successes and failures after a large experience. Individualization is foresight;—summarization is hindsight. Whatever may be the percentage of perfect and imperfect results to the surgeon, one patient dead is 100 per cent. mortality to the victim. Incomplete cures, complicated convalescence, in a word, imperfect and results, cannot be calculated in percentage.

The writer proposes to report a series of studies of efficiency and inefficiency of his individual work as represented by its product, end results. The plan followed will be similar in essential principles to that adopted by E. A. Codman of Boston and by the Committee on Standardization of Hospitals, of the clinical Congress of Surgeons of North America and is intended to embody the most important of the eligibility requirements for fellowship in the American College of Surgeons. The reports will be truthful and based upon actual records accessible to inspection by qualified inquirers. Only my own work upon my own responsibility during my residence of nine years in Richmond, will be recorded. None of the work of my various chiefs during my apprenticeship while "learning the trade" will be mentioned. The work reported will be of consecutive cases; mark the word, "consecutive" (Ed martin.)

The work has all been referred, over 90 per cent. from doctors. The operations have been performed in many different hospitals in Richmond and in neighboring towns. It has been a source of stimulation to work in hospitals open to a large number of surgeons where comparisons are made and the work is carefully watched by friends and colleagues. I have been assisted by qualified assistants, by resident physicians, by general practitioners, and in

a few cases by medical students, much help has been demanded from colleagues and especially from the patients' attending physician and many consultations have been held. Trained technicians and my present first assistant, Dr. E. B. Talbott enable me to work more rapidly. I have increasingly done the work in my own way realizing that the table is no place for consultation and have personally and painstakingly attended to all the details in post-operative treatment, individualizing each patient.

In the margin after the abstract of each case I shall place certain symbols which indicate the end result. These symbols will be practically the same as those employed by Coleman and at the end of each group of cases a brief analysis of the findings will be summarized.

The "satisfactory" cases will be briefly mentioned. Imperfections and failures even of slight consequence upon end results will be scrutinized, their apparent causes mentioned, and defects of product whether due to known or unknown, controllable or uncontrollable causes will be detailed.

For the present—until all the work to date can be recorded, the reports will be of groups of cases, grouped according to pathology. This method has contributed to me while taking the inventory, some information concerning disease. A report annually of all the work of each year, or a report of a given number of consecutive cases, might also be useful in other directions.

The grouping cases into series of sufficient size for comparative study, and by studying definite previously determined questions a rational clinical science can be established. By publishing the actual facts, bad as well as good results, hasty diagnosis and indiscriminate operating will be supplanted by better judgment, rational procedures and improved end products.

I would at this point plead with other more active, more experienced, more skilled surgeons to make some kind of similar reports. They would be of genuine practical value to surgeons, to the family doctor, to hospitals in aiding them to select members of their staff, and to the public in enabling them to judge of individual "surgeon competency." Men of my own age can become informed of better results by older and more distinguished surgeons; men desiring better products in special lines of work will become available as consultants, and the patient may obtain the benefit incident to being referred to the surgeon more

skilful as shown by end results than by "reputation."

It gives me great pleasure and greater comfort constantly to refer to surgeons of superior judgment and technical skill, difficult and doubtful cases. When the end result in the hands of others, is superior to our products, the patient has profited; when the result at the hands of the more skilful surgeon is bad, we escape responsibility and chagrin. Confidence in, and confidential to one's self are quite different in their effects. Excessive confidence conceives conceit. To be honestly confidential to ourselves conduces to a realization of our limitations and an admission of superior ability of others quite accessible.

Self-respecting surgeons make no pretense of competition "for trade" with those of demonstrated superiority of skill as shown by their products. Wholesome rivalry for greater efficiency as shown by end results is productive of benefit to the patient and to the art of surgery.

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Sanitary Markets.*

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One of the most important problems engaging the attention of the real sanitarian is the problem of seeing that the public is supplied with wholesome food at the lowest cost. No hygienic regulation can be of much value with an impure or an excessively costly food supply. Food and water are the very foundation of all health work, and no health department measures up to its full duty that neglects careful attention to either.

By pure food I do not mean merely the precaution that all injurious preservatives such as boric and salicylic acid are eliminated, which certainly should not be allowed, or benzoate of soda either, for that matter, but that foodstuffs shall be prepared and stored in clean surroundings and kept in the condition that is best adapted to their wholesome preservation until they are delivered to consumer.

A visit to almost any municipal market will disclose a situation that causes the ordinary eye to seek elsewhere for a resting spot. The place is usually a feasting ground for flies and a haven of refuge for rats. No one in particular seems to worry about the matter. The market has always been so, is the general view, therefore so it must remain.

In Lynchburg, Virginia, an attempt has

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been made to improve matters to some extent. A careful study was made of private markets and storage places for foodstuffs in different sections of the country. No public market visited was found worthy of study, save in observing what to avoid. A plan was formulated involving the application to the public market of some principles which were utilized in private markets.

In short the main feature of the plan was to install a mechanical refrigerating plant for the entire market, and this plan has been put into effect. At each butcher's stall is a refrigerator built of white enameled brick with proper insulation and large enough to hold all of the dealer's meats, which are cooled with mechanical refrigeration. Electric power is used. In front of the stall the glass show case counters are equipped with coils and are likewise chilled. Thus all the meat, save what is being cut up, is not only protected from dust, flies, and rats but is kept in dry cold air, that is in ideal conditions until sold to the customer. The temperature is regulated by thermostat and is set for 35 to 40 deg. Fahrenheit, which temperature is maintained automatically the year round, July and January. Of course other foodstuffs requiring cold are preserved from the same plant, with the exception of fish. Mechanical refrigeration as is well known is too dry for fish and ice is substituted for them. The market is an inclosed one with concrete floor drained so that it can be flushed with hose.

The market has served to give not only a clean and economical storehouse for the distribution of foods, but what is of as much or more importance it has served as an object lesson in demonstrating how to keep foods, especially meats. Instead of breeding it excludes both flies and rats. As we all know, flies and rats are two of our arch enemies against which war is at present being waged to the death by sanitarians. Such markets are formidable weapons in the attack on both.

The real reason for the warfare on flies is to prevent their access to foods. Such a market in large degree secures this relief. A necessary part in the campaign for the reduction of rats, is to exclude them from what they feed on. Such a market also to a great extent meets this necessity. No successful fight can be maintained against rats, unless foodstuffs are securely protected.

The total cost of the building and the equipment of this market, not counting lot, was \$62,000.00. The city auditor reports for one year the total income was \$10,342.51, expenses \$3,580.00, net income \$6,

462.51. A very fair dividend, all things considered, especially when it is borne in mind that the money dividend to the city was the least consideration.

As suggested above the outside effect is more important than even the market itself. Practically every butcher and dealer in the city outside the market has equipped a plant modeled on the municipal market, and without exception is pleased at the economy over old methods, at the increased sales, at the high state of cleanliness, and at the reduced labor of operation. One butcher who does about a \$60,000.00 business stated to me the other day that he saved by mechanical refrigeration at least \$200.00 per month, but that if he didn't save a cent, nothing could induce him to return to the old methods. He would go out of business first. This is about the opinion expressed by all.

Another matter which has nothing to do with a market house but which is a very essential part of any market in the broad sense, is securing a safe butter at a reasonable cost. While milk has received a great deal of attention from health experts, scant thought has been given to butter. General attention has been so concentrated on milk that we have well nigh forgotten butter, although butter will harbor bacteria, for example tubercle bacilli, for weeks, much longer than will milk. Butter in the South in the average city is supplied largely from farms. These farms would not be permitted to sell milk owing to lack of sanitary conditions but no legal obstacle has been interposed so far against their selling butter. It would not be advisable at present to cut off the sale of this butter, and yet there is no question but that it is dangerous. The remedy adopted in Lynchburg was to allow the creameries to purchase cream from barns not sanitary on condition that the cream be pasteurized. By pasteurizing the butter is made safe, and butter of better flavor is obtained by creamery methods. The creamery butter will displace most of the country butter owing to its superiority. When once the farmer sells to the creamery a line can be gotten on him and he can be more easily taught the importance of cleanliness. Do not understand me to say that I advocate unsanitary cream for butter. I believe in the strictest sanitation, but much if not most butter used in the South today comes from unsanitary farms and the urgent need is to see that this butter is first made safe and then go in for improvement in general sanitation. We have followed this method in Lynchburg, and now most of our butter is from the local creameries, and all of the cream is pasteurized and

comes mainly from dairies with greatly improved cleanliness both in methods and equipment.

Syphilis in Children with Special Reference to Modern Therapy.¹

By Lewis W. Elias, M. D., Asheville, N. C.

For generations syphilis has been a disease in a crystalized form. But with the introduction of the Wassermann reaction and of Salvarsan, investigators have been drawn to a reconsideration of the disease in the light of these fresh discoveries. This has brought out new facts, and reaffirmed old ones on more scientific grounds. So the disease now presents a freshness and interest that it has long been without.

A brief review of the chief points in syphilis may help to clear up some of the haziness that is apt to envelop an old subject. I shall confine myself to the pediatric aspect of the disease. However, the nature and effects of the spirochetes are the same in both hereditary and acquired syphilis.

The spirocheta pallada, the infecting agent in syphilis, is a motile spirillum. Its movements are in three directions: a drilling, a bending, and a back and forth movement. The presence of the spirochetes may be demonstrated in the various lesions. While acquired syphilis is very contagious, the hereditary form is only mildly so, and there are few reported infections from such cases. The new tests have not entirely cleared up the point as to which parent is directly responsible for the infection of the child. It is significant, however, that the mother's blood almost always gives a positive Wassermann reaction.

Generally speaking, the early lesions of syphilis in babies correspond to the secondary form in the adult; while the late form in older children is similar to the tertiary manifestations in the adult. Evidence of syphilis almost invariably appears in the first three months of life. Of 1,000 cases the symptoms appeared in the second, third and fourth weeks in over 55 per cent. Usually the "snuffles" and hoarse cry caused by the catarrh of the nose and larynx are the first things noted. This is followed by the eruption upon the face, neck and extremities, usually scant upon the chest and the abdomen. This is a macular eruption, of small, dark red spots, which comes out slowly—one to three weeks—fades gradually, and leaves a copper colored stain in the skin for a long time. A squamous eruption is frequent on the soles

of the feet and the palms of the hands. Fissures of the lips and anus are very prominent diagnostic points. Mucous patches are seen upon the mucocutaneous surfaces, and where the skin is thin. The early bone lesions are an epiphysitis of the long bones resulting in tenderness and often pseudo-paralysis. The spleen almost always is enlarged in all stages of syphilis. The liver may be enlarged. The nails in early syphilis may be claw-shaped, or may come off. Malnutrition and cachexia are often marked, the infant presenting a most wretched appearance.

In late syphilis we have various deformities of the teeth, the characteristic ones being found in the upper central incisors, which are shallow curved notches, often discolored. The shaft of the long bones is affected in late syphilis, an osteo-periostitis, resulting in a general enlargement of the bone; also the bones of the cranium may show nodules. Gummatous deposits at this stage may appear in the viscera, the skin or the mucous membranes, which, if they break down, form ulcers. The eyes may show an interstitial keratitis. Sudden deafness may occur, which is usually permanent. The glands, especially the epitrochlears, may be slightly enlarged, and if so, are of diagnostic value. The spleen is enlarged and often the liver.

It may be well to emphasize a few diagnostic points in syphilis that are occasionally confused. Enlarged glands are a late symptom. Notched teeth are found only in the second set. The diseased or deformed nails are an early symptom. The bones, generally speaking, in early syphilis, are affected at the ends; in late syphilis it is the shaft; between these two stages comes syphilitic dactylitis.

While the diagnosis of syphilis formerly rested upon such symptoms as could be found suggestive of the disease, we now have measures which are so sensitive that they respond not only to active and pronounced cases, but also to the mild and latent infections, even when no gross symptoms exist.

The Wassermann reaction, simply using the blood for the test, and taking no account of symptoms, has detected the presence of syphilis in cases that otherwise would have gone undiagnosed. The test is a very delicate one, and as modified by Noguchi is even more sensitive, so that save in the hands of skilled laboratory workers, especially those with experience in interpreting the reaction, there are large chances of error. The extensive employment of this test by improperly equipped workers has caused much confusion, and has worked great injustice to many patients. This fact

¹Read before the N. C. State Medical Society, at Raleigh, June 16, 1914.

has cast some doubt upon the accuracy of the test. But Holt while admitting that the test is not infallible, says that "it is the consensus of opinion at present that latent as well as active syphilis gives a positive response to the Wassermann test," and "that children who react positively should receive the benefit of anti-syphilitic treatment." As to errors in the test, he says that "with proper technic they are chiefly on the negative side and not numerous."

Holt's conclusions were drawn from a series of cases in the Babies' Hospital, the Wassermann reaction being done under the supervision of Noguchi, and by one of his assistants. 31 cases of syphilis gave 30 positive reactions; the 31st case was a five-months-old baby that had been treated regularly for three months with mercury. Of 178 cases not regarded as syphilis, 167 were Wasserman reaction negative and 11 positive. Of these 11 eight were later shown to be syphilitic by other findings.

Blackfan, Nicholson and White, in a series of 101 hospital cases, had a similar experience and felt equally convinced of the accuracy of the test.

A still further method, which is becoming more and more popular, is an examination of the cerebrospinal fluid along with the Wasserman reaction of the blood. This gives a positive Wasserman reaction, a lymphocytosis, and an increase in the albumen of the cerebrospinal fluid.

The Luetin test of Noguchi is made by injecting into the skin an emulsion of killed spirochetes, followed in positive cases by an indurated papule frequently going into a pustule, remaining four or five days, and followed by a brownish discoloration which may last several weeks. Noguchi considers this test accurate, and Alan Brown's experience with it in the Babies' Hospital was satisfactory. As employed, to a limited extent, by Dr. W. C. Brownson and myself the results have been disappointing.

As to the prognosis in syphilis, the younger the infant the worse the outlook. Breast-fed babies have a much better chance than those on artificial food. And, by no means least, those do best where treatment is begun early and continued regularly. Holt's and Brown's conclusion is that "the best results in hereditary syphilis are obtained by the early use of salvarsan followed by mercureal treatment.

One of the odd things about the treatment of syphilis is that, in a disease where we already have one of the few known specifics in all the wide range of medicine, we should have found another and a far

more active treatment. But Salvarsan, with all of its brilliancy in the treatment of adults, did not become so popular in treating children, for two reasons: First, because of the frequent necrosis at the site of the injection, when given subcutaneously. Second, its intravenous use was difficult on account of the small veins. But since Holt and Alan Brown, at the Babies' Hospital in New York, found that it could be given to infants with ease and safety in the veins of the scalp, and further, that the usual dilution was unnecessary, its employment in children is now on the same footing with its use in adults.

Of the startling results following the use of salvarsan no one need be reminded. Neo-salvarsan, while somewhat less active than salvarsan, is much simpler to use, and in correspondingly larger doses is very efficient.

If we remember that salvarsan destroys the spirochetes and their symptoms, while mercury fortifies the body tissues against the products of spirochetal activity, and affects the spirochetes indirectly, we will see the logic of combining the two treatments. Starting with an injection of salvarsan, or neo-salvarsan, we rapidly destroy the spirochetes and clear up the symptoms of the diseases, and carrying the treatment along with mercury we build up the resistance on the body side, placing the disease, as it were, between two fires. This has been found the most efficient and by far speediest method of treatment. The mercury is used constantly as formerly, while the salvarsan is repeated at intervals, varying with different men, the injections ranging from every few days to every month or so, and the dose in infants from .05 gm. to .2 or .3 gm., according to age. The treatment to be conclusive is checked up by the frequent employment of the Wassermann reaction.

In conclusion I wish to report a typical case of hereditary syphilis. C. M. was two months old, weighed 8 pounds, and was in very bad condition. The mother had never had symptoms of syphilis. By her former husband she had six healthy children. Following the marriage with her present confessedly syphilitic husband, there was first a miscarriage at four months, then twins, one born dead, then finally C. M. was born, a seven-pound healthy baby. When six weeks old he developed "snuffles." This grew rapidly worse so that he could only breathe with his mouth open. Sores appeared upon his body, and his general condition rapidly declined. He was taken to a throat specialist when nine weeks old, at which

time I saw him in consultation. He was thin and anaemic, with loose and wrinkled skin. His nose was stopped up and he struggled for breath with his mouth wide open. There were deep fissures in the lips and crying kept these cracked open so that the whole mouth was literally a ring of blood. Sores were on the face, abdomen, scrotum and between the toes. He truly was a pitiful sight. The mother's milk had failed and he was on condensed milk 1.16. His chances for recovery seemed very slim. It was felt that his was preeminently a case for a swiftly acting drug. .1 gm. of neo-salvarsan in a 5 c. c. dilution was given in the posterior temporal vein on the right side of the head. His improvement began within twenty-four hours. In five days all the skin lesions were well. The fissures in the lips took a few days longer to heal, by which time he was able to breathe easily with his mouth closed. He gained a pound in the week following the injection, was comfortable and slept well, and, as the mother said, "seemed like a new baby." He has since been treated with mercury with steady improvement. It was felt in this case that by starting the treatment with neo-salvarsan not only much time was gained, but probably the baby's life was saved.

Remarks on Intrathecal Injections as a Factor in the Improvement of Tabetics After Salvarsan

By Dr. Tom A. Williams, Washington, D. C.,
Correspondent M. Neurology Society of
Paris, Etc.

The pathology of Tabes was shown by Nageotte in 1894 to be a granulomatous radiolitis years before the discovery of the tropanema pallidum and therefore not para nor meta but syphilitic. "The Pathogenesis of Tabes" (Amer. Med. Sciences) in 1908 attempted to show to the American medical profession the facts upon which they could base its treatment, which I have been conducting successfully since coming to Washington in 1907. I tell this so as not to be accused of reactionarism in what I shall say.

Clinical—It has not been shown that intrathecal injections by the Swift-Ellis method are superior to intensive treatment by other channels. For instance, Sachs and Strauss reported to the Amer. Neur. Society 137 cases treated since 4 years with almost uniform success. Upwards of 60 cases following my recommendation have been treated with complete disappearance of pain and relief or disappearance of ataxia, according to the intensity and duration of the disease.

Babinski and Abadie in France had been using mercury intravenously with success years before salvarsan was introduced. Since then Sicard, Ravaut and others have corroborated them. Since salvarsan, numerous German observers reported numbers of successfully treated neurological syphilides.

Two of my own cases exemplify the kind of result obtained:

A lawyer from Pennsylvania had had pains treated as rheumatic for 6 years; latterly these had increased and some numbness and unsteadiness in gait and mictional difficulty had supervened. His left eye and ear too were losing function. When he was referred to me, I found the left patellar and Achilles reflexes absent; the left pupil dilated, irregular and parietic to light, the pain sense dull and delayed in the lower limbs and thorax; tremor of the tongue; slight slow nystagmus; slowed diadicokinesis, a stamping and occasionally uncertain gait, with left rhomberg; the Wasserman reaction was negative, but in the cerebro-spinal fluid we found 38 cells per c. m. and an increase of protein. He was given four injections of mercury and two of salvarsan. At first the pains were increased, but they quickly ceased. Forty days after, there were only 13 cells per c. m. in the spinal fluid; five months later, the diadicokinesis was normal, the gait was improved, there was less tongue tremor and no nystagmus, the sensibility except in the left tibia had returned, although the left pupil had remained parietic; but the pains having returned, were quickly dissipated by salvarsan; and he was urged not to neglect the inunctions as he had done. The following year he again returned for examination and only 9 cells per c. m. were found in the fluid. Although he had practically no further trouble he was again given salvarsan twice. It is now two years and a half since he was first seen and he remains quite well without any ataxia.

Two years ago, I saw a woman from West Virginia who had been treated six years for rheumatism at Clifton Springs and other places. She showed great loss of weight and strength, marked ataxia, almost complete loss of pain, vibration and attitude sense of the lower limbs, as well as loss of the tendon and pupil reflexes. She was recommended salvarsan and mercury, against the opposition of several physicians. I saw this patient only a few weeks ago, and although she has had only four periods of treatment of two salvarsans and from four to six weeks of mercurial injection in each, she is perfectly well and at normal weight save for the lost reflexes and a slight sen-

sory loss in the tibial border of the feet, and can work with enjoyment again.

Laboratory.—Firstly, Benedict analyzed 20 samples of serum obtained for Swift-Ellis treatment after the injection of salvarsan; only in two did he find a faintest trace of arsenic. Therefore we can exclude an arsenic effect in the discussion of the manner of action of intrathecal injection of serum. Besides this, this serum produces no improvement unless salvarsan is introduced into the blood also, and normal serum is declared to have no particular effect. On the other hand, arsenic has been found in the cerebral ventricles after intravenous injections of arseno benzol.

Secondly, the disease process is not confined to the surface of the meninges; indeed it is most marked around the blood vessels, many of which are deeply situated. The tissues around these are nourished from them and not from the cerebrospinal fluid. But foreign substance in the thecal sac may irritate the pia arachnoid, thereby inducing hyperaemia of the meninges, the increased exudation from the vessels of which of serum laden with arsenic from the preceding intravenous injection is the explanation, if there is any advantage at all in the method of Swift-Ellis. Sicard and Ravaut indeed have been using injections of weak salts of mercury and magnesium along with mercury intravenously with some success, whether with greater success than by administration through the blood alone only a large number of observations can show after much time.

It must be remembered that all the cases which have shown improvement after being treated intrathecally have received intravenous treatment as well, and most of them large amounts frequently repeated. It is to this latter that we must attribute by far the most of the improvement of such cases in many of which I have seen relapses.

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The Art of Prescribing.

Luff (The British Medical Journal) makes the statement that potassium iodide is a drug that very frequently is prescribed in the treatment of the various forms of fibrosis, and invariably orders it in the following combination. Taking an average dose for an adult, it consists of: Potassium iodide, 10 grains; the compound glycerophosphate syrup (B. P. C.) 2 drachms; spirit of chloroform, 12 minims, and peppermint water to the fluid ounce. The compound glycerophosphate syrup disguises the taste and counteracts the depressing effect of the iodide, while the spirit of chloroform and pepper-

mint water act as preservatives, and so prevent the bacterial growth which otherwise would occur in the diluted syrup.

An extremely useful mixture for the relief of irritable cough, and especially of the troublesome post-influenza cough, consists of: Morphine hydrochloride, 1-24 grain; heroin hydrochloride, 1-24 grain; apomorphine hydrochloride, 1-48; dilute hydrochloric acid, 5 minims; syrup of Virginian prune, 1-2 drachm, and chloroform water to half an ounce. This constitutes the tablespoonful dose, which should be taken every four hours. The medicine is very palatable, and the presence of the hydrochloric acid effectually prevents the precipitation of any of the alkaloids.

For the relief of pain, when the employment of morphine is not desired, a combination of analgesics is much more effective than the use of one alone. A most useful prescription for the relief of pain of sciatica consists of novaspirin, 7 grains, pyramidon, 6 grains; quinine salicylate, 1 1-2 grains, and codeia, 1-3 grain. This is prescribed in a cachet, which is to be taken every four hours.

A simple but effective medicine for the relief of ordinary headache consists of ammonium bromide, 10 grains; phenazone, 10 grains; caffeine citrate, 5 grains; and chloroform water, 1 fluid ounce. This constitutes a single dose, which as a rule rapidly relieves the headache, but if necessary it may be repeated in two hours.

The most effective combination for the internal treatment of acute and subacute gout is a pill containing colchicine, 1-70 grain; sugar of milk, 1-2 grain; extract of nux vomica, 1-4 grain extract of hyoscyamus, 1-2 grain, and extract of gentian sufficient to make the pill. The object of the sugar of milk is to allow the colchicine to be triturated with it before working it up with the extracts, as otherwise the minute amount of the alkaloid would not be evenly diffused throughout the pill mass, and so the risk of a poisonous dose of colchicine getting into one pill might be incurred. One pill is to be taken to the severity of the attack, which is rapidly relieved by this treatment.

Gastric flatulence is a very common and annoying ailment, for which almost immediate relief can be obtained by a mixture containing in each dose aromatic spirit of ammonia, 25 minims; spirit of chloroform, 15 minims of peppermint, 12 minims, and spirit of cajuput, 8 minims. This combination constitutes a teaspoonful dose, which is to be taken in a wineglassful of water whenever the flatulence is troublesome.

For external use in the relief of pain,

whether due to fibrositis, neuritis, or neuralgia, the following combination is most useful: Chloral hydrate, 6 drachms; camphor, 6 drachms, and menthol, 3 drachms, are well rubbed together in a mortar, when the three solids form a liquid without the addition of any fluid. This liquid should be painted over the painful area and gently rubbed in, when rapid relief from the pain is usually obtained. For those patients who object to the sensation of coldness produced by the menthol the equal parts of chloral hydrate and camphor can be used instead, as they also form a liquid when triturated together.

The Motor in War.

Motor traction has to a large extent revolutionized the conduct of war. This statement refers not only to war regarded from the offensive and defensive standpoints, but with regard to the treatment and care of the wounded. Indeed the proper treatment of those wounded in the present war depends almost wholly upon the provision of an adequate supply of motor ambulances. In France, for instance, at the present time or at any rate in that part of France lying between the border of Belgium and Paris and over which armies have been advancing and retreating, bridges have been destroyed and railway facilities so disorganized that it is impossible to convey the wounded by rail to Paris. Furthermore, owing to the long range of modern artillery, field hospitals have to be placed at least 12 miles in the rear of armies. It is obvious that the more quickly wounds are treated the better will be the chances of good results or of ultimate recovery. This is especially the case with wounds infected by soil and which if not cleaned promptly and subjected to treatment by antitetanic serum will eventuate in lockjaw. As a matter of fact, tetanus has been most disastrously rife among the troops of both the allied armies and the Germans, because it has not been possible to treat soil-infected wounds at once and in the manner best calculated to prevent the germ of tetanus from gaining a foothold.

In a paper contributed to the Military Surgeon for November, 1914, Capt. F. W. Foxworthy, Medical Reserve Corps, U. S. A., emphasizes the need of motor ambulances for war purposes and says that acting on a suggestion from the British War Office the committee in charge of the American Women's War Relief Fund has dropped the idea for the time being of equipping and maintaining a hospital ship and has instead presented the medical

corps with six motor ambulances for use at the front. Captain Foxworthy draws attention to the fact that American surgeons in Paris start early in the morning with a large number of motor cars and go to the battle scene forty or fifty miles away, pick up the wounded, and carry them back to base hospitals near Paris. He also states that the German army has motor hospitals.

In the Glasgow Medical Journal for November, 1914, the need of ambulance wagons for the British mobile field hospital is referred to and Sir G. T. Beatson is quoted as saying that increase of impedimenta in modern warfare has made the transport question one of the chief problems of the present campaign. For the general supply of food, ammunition, medical stores, etc., to an army there are three zones of operation. The first starts from the reserve depot and base of supply and goes up to the railroad; from there another zone extends to what is called the "refilling zone," and then there is the zone of the fighting line. In each of these zones a different vehicle of transport has to be employed. With regard to medical assistance to the wounded, owing to the destruction of railways and bridges the only way to bring the wounded from the cleaning hospital to Paris as quickly as possible is by motor ambulances. Sir Alfred Keogh, head of the British Medical Service, has stated recently that what is wanted is money for the purchase of motor ambulances; and indeed opinion seems to be unanimous that motor transportation is essential to the success of an army in the field and that it is of no less value in the treatment of the wounded. This is one of the great lessons already learned from the present war.

Sublingual Medication.—Paulson, in The British Medical Journal, calls attention to the great usefulness of this method and to the fact that it seems to be so little known. Any soluble medicament, especially the alkaloids are even more readily absorbed from the mucous membrane beneath the tongue than from the subcutaneous tissue, furthermore it is safe, cleaner and quicker. The doctor says that in the South African war, it was used extensively and that one physician told him, that he could treat fifty wounded and suffering soldiers in the same length of time that he could prepare to give a hypodermic to one.

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MEETING OF THE SOUTHERN MEDICAL ASSOCIATION.

The eighth annual session of the Southern Medical Association was held in Richmond, Va., November 9, 10, 11, and 12, 1914, at the Jefferson Hotel. It was one of the greatest, if not the greatest of gatherings ever held of the medical fraternity of the Southland. A most capable secretary in the person of Dr. Seale Harris of Mobile, Ala., who had secured a program of surpassing merit, a president, Dr. Stuart McGuire of Richmond, Va., whose name is only suggestive of gentle gracious manner, surgical ability of highest degree, and positive genius as a presiding officer, the meeting place, historic, lovable, beautiful, Richmond on the James, the weather all that could be desired, absolutely all the setting favored the production of a great occasion, and in every sense it was worthy of those who had labored for a brilliant session.

On Sunday preceding the session the pulpits of various churches in the city were occupied by eminent gentlemen of the profession who delivered eloquent health sermons to large and interested audiences.

On Monday there were two sessions each of the Conference of Health Officers of Southern States and Surgeons of the various Southern Railways. Both organizations were well attended by the leaders of public health work and railway surgeons. A number of admirable papers were read in each meeting, and the discussions were of high grade.

Monday afternoon a Symposium on Tuberculosis was held in the auditorium of the Jefferson Hotel which was participated in by leaders in both public health and therapy lines. Monday evening the large attendance was regaled with a lecture by Dr. Howard A. Kelly on "Radium," followed by Dr. Harvey W. Wiley on "Public Health." Dr. Kelly's well known enthusiasm on his subject naturally gave an interest to his lecture, but the acme of real intellectual enjoyment for a practical doctor of medicine was reached under the soothing spell of Dr. Wiley's terse epigrammatic sentences, bristling with fact and humor. As a well known Carolina doctor said to Dr. Wiley at the "smoker" later in the evening:

"Dr. Wiley I can not recall when I was ever more delightfully entertained for an hour with a lecture than by you, and yet Doctor, I cannot recall that you told us a single thing that every well informed medical man does not know."

Tuesday Morning the S. M. A. began its session by formal welcomes by the Mayor of Richmond, Dr. Jas. A. White and others representative of the various civic and professional bodies. The President's Address, "The Profit and Loss Account of Modern Medicines," delivered in his usual vigorous convincing style, by Dr. Stuart McGuire was listened to with rare attention, and was without invidious discrimination one of the finest president's messages we have ever listened to in any medical society.

Following the address of Dr. McGuire, the different sections of the Association took up their elaborate programme of papers and three busy well filled days followed. The Symposium on "Malaria" with Dr. W. C. Gorgas leading the discussion introduced by Dr. C. C. Bass, proved an incident of much interest.

The social activities of the week were such as one familiar with the splendid old time hospitality of the South's most famous city, Richmond, would naturally expect. The various "smokers," "receptions," "dinners," "luncheons," public and private, general and special, were all well attended and greatly enjoyed, and yet so skillfully had the able secretary, Dr. Seale Harris, arranged his complicated programmes, there was found time for everything. A very large amount of excellent work was done during the sessions, and a plenty of time was found too for free participation of the many social delights and hospitalities of the local profession.

Officers for the Southern Medical Association in 1915 were elected as follows.

President—Dr. Oscar Dowling, Shreveport, La.

First Vice-President—Dr. R. C. Dorr, Batesville, Ark.

Second Vice-President—Dr. McGuire, Newton, Richmond, Va.,

Secretary-Treasurer—Dr. Seale Harris, Mobile, Ala.,

Place of meeting, 1915 Dallas, Texas.

J. H. W.

DR. STUART MCGUIRE OF VIRGINIA AND OF THE SOUTH

Dr. Stuart McGuire of Richmond, Va., the son of one of the nation's most celebrated surgeons, has been more or less constantly in the public professional eye since his graduation in medicine more than

twenty years ago when he became the surgical assistant and copartner of his distinguished father in his surgical and professional duties. How well he has borne the glamour and the scrutinizing tests of the limelight, his superb record of achievement along all the lines of his varied endeavors splendidly attest.

Beginning the work of a surgical teacher when a mere boy, it may be truthfully said of him that no teacher of doctors, dead or living, has a more devoted throng of friends than has Stuart McGuire in the ranks of those he has taught surgery to during the past two decades. His popularity as teacher, and man as well, were strikingly evinced a few years ago when the oft-cherished idea of uniting the two medical schools in Richmond with a view to building from their union a great Virginia College of Medicine and Surgery was materializing. In the discussions Dr. McGuire was one man that all agreed ought to be a member of the new faculty, a judgment of the old faculties and trustees of both institutions, concurred in by the profession at large.

Widely loved by a large clientele, nation wide in its residence, respected by his neighbors, it has remained for the members of his own profession wherever and whenever, opportunity afforded, to give expression to their appreciation of his lovable disposition, gentle, gracious manners, learning and skill as a most gifted surgeon—and, beginning with the local professional organizations of his home city, the profession's chiefest honors have been showered on his deserving head. Presidencies of almost every medical or surgical society he has ever been affiliated with, have in due time been his. The conservative old Virginia State Medical Society, the splendid aggregation of skilled gentlemen constituting the Southern Surgical and Gynaecological Association, the alert vigorous men of the Tri-State Medical Association of the Carolinas and Virginia, and more recently the typically representative of the South's professionally best in the personelle of the Southern Medical Association, have each alike felt honored in bestowing their chiefest honor on him.

And these distinctions have been always most worthily worn. His President's Address at Richmond recently was a masterpiece of medical literature. Replete with careful original thought, it reflected the ripened judgment of the gains and the losses of the medical profession as seen by one known of all men to be a lover of his profession and ever jealous of its fair fame and just advancement. It is hoped by many who had the pleasure of hearing his clean-

cut, choicely expressed verbiage that the Association will see to it that so powerful an address may receive the widespread circulation it so richly deserves.

J. H. W.

DR. OSCAR DOWLING OF LA.

At the recent eighth annual session of the Southern Medical Association held in Richmond, Va. Dr. Oscar Dowling Shreveport, La., the distinguished head of the Louisiana State Board of Health was elected President for the ensuing year. This meeting of the S. M. A. was a great one, more than 1000 physicians attended the various sessions, and sections and allied associations, during the week, the Presidential address of Stuart McGuire was notable, and will be read and commented on with favor by medical thinkers in distant lands as well as in the Union, the papers well digested, the discussions crisp, sharp, and pertinent to a degree—in short it was a great meeting of a great society.

And the pace that was set for the S. M. A. in Richmond will be readily kept to by the incoming President, Dr. Oscar Dowling. A gentleman of pleasing personality, distinguished ability, as a medical man and a sanitarian of the first rank, whose work challenges for favorable consideration that of the best on the earth, the presidency of this great Southern Medical Association in resting on his broad and worthy shoulders, reflects alike the wisdom of the Council and the fitness of the recipient of the choicest of Southern Medical Society honors.

J. H. W.

THE TREATMENT OF CUTANEOUS CANCERS.

No one form of treatment will apply to all forms of cutaneous cancer: these neoplasms must be treated according to their ability to metastasize, and also, but to a lesser degree, according to their location. A prickle-celled cancer, whether it originates on the skin or the mucous membranes, should be radically excised, and the neighboring glands should always be removed, for they usually become the site of secondary cancerous deposits, often at a very early date. On the other hand the basal celled neoplasms never metastasize, hence local removal will suffice, even at a late stage. Growths springing from glands of the skin will probably give rise to glandular involvement, hence the glands as well as the original tumor mass should be removed. In the melanotic group operation is usually useless as wide spread dissemination takes place very early, but in certain cases this

occurs to the glands alone, so removal of the growth and glands may cure an occasional case.

In all cases in which the glands need removal radical surgical operation is the only method to be considered. The glands should be first dissected out by means of the knife, and the local growth removed by either the knife or the actual or electric cautery. In the hopeless cases it is justifiable to try either the X-ray or radium: they will often prolong life and render the patient more comfortable, even if they do not effect a complete cure.

In the basal celled group, the so-called redent ulcers, many methods have been advocated. Among these methods are the use of the knife, the actual cautery, the curette and caustic, caustic pastes, the X-ray and radium. The knife has the advantage of leaving a clean wound that will speedily heal, and it also gives tissue that is suitable for pathological examination, a much desired point if we are to learn more concerning the pathology of cancer. It is probable that fewer recurrences will take place in the scars if the cautery is substituted however.

The curette and caustic frequently fail because they do not go deep enough, and hence are not to be recommended for general use, although they do seem to be very useful for cases invading the orbit. Caustic pastes are to be condemned. In the first place they are painful, in the second place their action is difficult to control, and in the third place they are totally inefficient. At the Johns Hopkins Hospital it was found that nearly one-half of all cases of skin cancer coming to the surgical department had previously been treated by caustic pastes. In addition no one has ever published a *series of permanent cures* by this method.

The X-ray is very useful in inoperable cases, and also in early cases so situated that operation would be mutilating, as in cancer of the eyelid or the ear. Not more than two or three massive doses should be given; if they do not work very little time is lost. This method is probably just as good as radium, and is much cheaper for the patient.

Radium will often cause an epithelial neoplasm to melt away in a rather wonderful manner, but heavy doses of the Roentgen rays will do the same thing, and it is very doubtful if radium will accomplish anything that the X-rays cannot equal.

FOR GOOD HEALTH AND LONG LIFE.

Necessary Requirments

In order to appreciate the magnitude of the task we must accomplish mental and

moral before we can approach, not to say anything of attaining physical perfection, let us briefly consider some of the things that must be done:—

1. Every child must be well born; that is it must have the right kind of heredity.

2. The propagation of those suffering from serious transmissible diseases, physical and mental defects (as insanity, imbecility, epilepsy etc.) as well as confirmed criminals must be stopped.

3. Environmental influences must be changed:—

(a) Our laws must be framed and administered so as to give equal opportunity and justice to all.

(b) Our educational system must be re-modeled and so conducted as to develop the physical, mental and moral powers of the students to their highest capacity; the things they are taught should be those which will best prepare them to cope with the duties and responsibilities of life, that will make them strong, healthy, intelligent, moral and broad minded men and women and honest, just and patriotic citizens.

(c) Our National Government must have a Department of Health whose head shall be a member of the President's Cabinet. It should be the duty of this department to investigate the causes of diseases, to originate and supply methods for their prevention and in conjunction with state and municipal health agencies help to stamp them out where they have already obtained a foothold. This department should also organize and carry out a systematic campaign of health instruction that will reach every man, and woman and child in the nation. These activities would bring the workers in close touch with poverty, crime and all kinds of defects and would give them a clear and true insight into the causes of much of our social unrest, and would enable them to suggest rational and effective measures for their relief.

4. We must have higher ideals of our duties as citizens; we must sacrifice some of our desire for wealth and power, must curb our selfishness and vanity and consecrate our lives to the service of humanity; we should be willing, yea, glad to do something for our brother man rather than DO HIM FOR SOMETHING.

5. Every one should know enough about the structure, functions and proper care of the human body to keep it in good running order and guard himself or herself against injury or disease.

MEMBRANOUS COLITIS.

One among the most painful and intractable diseases is the one named above. Nine times out of ten it involves the descending colon principally and is often diagnosed as simply proctitis, but it includes not only the rectum, and sigmoid but more or less, the entire colonic tract.

While all physicians recognize its character, and location, the all important desideratum is, the best line of treatment to pursue. Cathartics should be given sparingly, and with careful discrimination. Irritating vegetable and chemical purgatives must be avoided. Enemata of a nonirritating character can not be avoided as they most thoroughly remove muco-membranous matter. Soda bicarbonate in sterilized water is serviceable. Emulsions of olive oil or sweet almond oil should be used as injections twice a week. It has a fine effect. Solutions of nitrate of silver, when bowels are cleared up, act well and, also a solution of borax and salicylate of sodium. Some recommend the use of 1 per cent. solution of permanganate of potassium, ichthyol, and sodium salicylate as almost specific. For the fermentative condition of the alimentary tract, nothing does better than salicylates benzoate of guaiacol, salol, resorcin, and sometimes, small doses of calomel.

The diet is of vital importance. It should be bland, and well cooked. Blancmange, milk custard, egg albumin, milk with Robinson's pearl barley, etc. No gritty food and no fruit but oranges and pineapple juices may be given. To do much good in treatment, the remedies must be used topically so as to come directly in contact with the seat of the inflammation and ulceration.

WINCONSIN MARRIAGE STATUTE RE-QUIRING CERTIFICATE OF HEALTH PRIOR TO MARRIAGE HELD VALID BY A DIVIDED COURT.

In August 1913 the legislature of Wisconsin enacted a law requiring that "all male persons making application for license to marry to be examined by a physician and file a certificate showing that they are "free" "from acquired venereal diseases so nearly as can be ascertained by physical examination and by the application of the recognized clinical and laboratory tests of scientific search." before a license is issued.

On Jan. 1, 1914 the law became effective in the state. It has been the subject of much speculation throughout the country and its validity has been called in question. Recently a test case was brought before the Wisconsin Supreme Court, and that body has sustained it.

The statute was assailed as being an unconstitutional interference with the natural right of individual citizens, as being discriminatory in applying only to males, females not being required to either be examined medically, or produce health certificates, as being unreasonable and impracticable of enforcement in that it only provided for a fee of \$3.00, a sum it was alleged for which examinations could not be made of the requisite thoroughness. The turning point in the construction of the statute and the rendering of the decision finally, was on the question as to whether or not the wording of the law necessitated the use of the Wassermann test. It was admitted that if this test was required, the law could not be enforced with the \$3.00 examination fee. The court opinion was divided, but the majority held the statute only contemplated a careful physical examination with the application only of the common customary methods of diagnosing venereal disorders such as would be made use of by the average general practitioner of medicine. The court was unanimous in upholding the right of the state to regulate the marriage relation, but divided as to the wisdom of the statute and the practicability of its enforcement.

Since January 1st, 1914, it is stated, that large numbers of Wisconsin people have found it convenient to wed outside the state.

PHYSIOLOGICAL INTOXICATION.

Unless a man is careful to keep his natural secretions normally active, auto-intoxication, or self-poisoning is sure to supervene in a more or less degree. The human body is normally the laboratory of poisons, and only by the normal action of the skin, kidneys, lungs, liver, and intestines can gradual suicide be averted.

The sedentary, the brain workers, the gustatory gourmands, and the high livers are the ones who are peculiarly self-destroyers. Their very manner of living and their occupations tend to load up the system with poisons. Moreover, they neglect, from business stress and strain, to properly and promptly attend to eliminate the toxins which would naturally accumulate. As almost a universal rule, the hard working, manual laborers are more free from physiologic toxins. And what is more notable, they never have the sedentary person's disease, appendicitis. If one will investigate this fact, it will be readily seen that such exemption is due to an active life, eating plain wholesome food, and all

the secretions, and especially excretions, are regularly performed. The great cause, as has been said, of much intestinal intoxication, and sluggish organs, is the result of high living, rich sophisticated viands, neglect of nature's calls, and a want of physical exercise.

Editorial News Items.

At Charlotte, N. C., November 6, a jury in the Superior Court rendered a verdict in favor of the defendant Sanatorium in an action for damages brought by a lady who six years ago had performed at the Charlotte Sanitarium in that city a minor operation followed by an attack of nephritis alleged by the plaintiff to have been due to the careless administration of ether. A number of leading North Carolina and South Carolina surgeons testified in the case, and the jury found for the Sanatorium in each count.

The Supreme Court of North Carolina has just handed down a decision reaffirming the judgment of the lower courts in favor of the defendant in the case of Salisbury versus State Hospital for Insane at Raleigh, N. C. It appears that a former Governor, appointed the plaintiff in the action a director of the State Hospital during a recess of the State Senate. Later the Legislature met and another Governor designated A. B. Croom as director to fill the vacancy for which the preceding Governor had made an appointment, but which had not been confirmed by the Senate. The court sustained the appointment of Croom, taking the position the Governor could, at the time of the initial appointment, appoint only for the interval pending the session of the Senate, when it would be incumbent on the then Governor of the State, to send in to the Senate, then in session, an appointee. This Governor Crain did, and the court upholds the appointment.

Dr. J. H. Harris, Raleigh, N. C., who made a remarkably high grade before the North Carolina State Medical Examining Board in Raleigh, N. C., last June has just successfully passed the United States Examining Board at Washington, D. C., and will be commissioned for the Naval Medical Service.

Dr. J. N. Gill, Weaverville, N. C., has recovered from injuries received in an automobile accident near Asheville early in November.

The annual session of the Southern Surgical and Gynaecological Association under the Presidency of Dr. John Wesley Long, Greensboro, N. C., will be held in Asheville, N. C., December 15, 16 and 17, 1915. A carefully selected program listing for essays and addresses some of the most notable medical and surgical names on the continent has been arranged which on the continent has been arranged which ways associated with medical society session in Asheville, will render the meeting of more than usual interest. Dr. W. D. Haggard, Nashville, Tenn., is Secretary.

Dr. W. S. Hall, Professor of Physiology in North Western Medical College, Chicago, Ill., was a welcome lecturer to the student body of Elon College, Elon, N. C., on November 8, 1915, and two days later to a Columbia, S. C., audience of students.

A railway mail clerk in the Superior Court at Asheville, N. C., was awarded damages of \$75.00 against the defendant railway company for frostbitten feet sustained while in discharge of his duties.

Dr. S. W. Pryor, Chester, S. C., has received official notice of his election to membership in the American College of Surgeons.

Dr. Chas. H. Cocke, Asheville, N. C., was married in Philadelphia, Pa., on November 12, to Miss Amy Grace Plank of that city, a younger sister of the famous artist, Geo. Wolfe Plank. Dr. Cocke is one of the leaders of the younger medical men of Carolina's charming mountain metropolis, and The Journal extends heartiest felicitations.

The Southern Association of Railway Surgeons held an interesting session in Richmond, Va., the previous meeting of the S. M. A. in that city November 10-12. Several papers were read and discussed during the one day's session. The association will meet in Dallas, Texas, in November 1915, under the direction of the following officers:

President—Dr. T. H. Hancock, Atlanta, Ga.

Vice-President—Dr. Southgate Leigh, Norfolk, Va.

Secretary—Dr. Clarence H. Vought, Richmond, Ky.

The Fifth District Medical Society of South Carolina held its annual meeting at Rock Hill, S. C., November 20, Dr. E. W. Pressly, Clover, S. C., President, with

Dr. Hennies, Chester, Secretary.

Several excellent papers were read and the discussions were lively and of interest.

Recently Dr. R. F. Jeffries, Spartanburg, S. C., at the instance of local authorities in Spartanburg, S. C., conferred with Dr. Robt. Wilson, President South Carolina State Board of Health, with a view to securing, if possible, the co-operation of the State Board of Health in the matter of endeavoring to secure funds from the forthcoming South Carolina Legislature for the continuing of the work of the Thompson-McFadden Pellagra Commission at Spartanburg. The work so far, we are advised, has been paid for by Eastern gentlemen as a work of pure philanthropy, and it is thought the State possibly should assume a part at least of the expense. The work done by the Commission, we may say, is, so far as their published reports would indicate, of a high grade, and advance is constantly being made in the direction of ascertaining the truth as to pellagra.

Dr. William James Battle, a son of Dr. Kemp P. Battle, formerly President of the University of North Carolina, and a younger brother of Dr. Kemp Battle, Jr., the well known oculist of Raleigh, N. C., has been appointed Acting President of the University of Texas.

At the recent session of the American College of Surgeons in Washington, D. C., the following North Carolina gentlemen were elected fellows: Dr. J. F. Highsmith, Fayetteville; Dr. Chas. W. Banner, Greensboro; Dr. M. H. Fletcher, Asheville; Dr. Geo. W. Pressley, Charlotte; Dr. E. Reid Russell, Asheville; Dr. Albert M. Whisnant, Charlotte; Dr. Charles M. Strong, Charlotte.

At the bride's residence in Singleton, S. C., on November 12, 1915, Dr. Thomas H. Symmes of St. Matthews, S. C., was married to Miss Margaret Wienges. The affair was a beautiful home wedding amid attractive surroundings, the bride one of South Carolina's fairest daughters, the groom a graduate of the Medical College of South Carolina, class 1907, and a physician of character and growing reputation in St. Matthews, S. C.

The Darlington, S. C., young medical graduates of the present year of the Medical College of South Carolina have received hospital appointments in Charles-

ton, S. C., recently. Dr. Oscar Alexander at the St. Francis Xavier and Dr. Walter Bristow at Roper Hospital.

Dr. Chas. S. Grayson, of High Point, N. C., is doing post-graduate work at the New York Post Graduate Medical School and at the New York Lying-In Hospital.

Dr. R. H. Bradford, of Burgaw, N. C., died at the James Walker Memorial Hospital November 25th. He went there for treatment three weeks ago. Dr. Bradford was a native of Mecklenburg County and had been living in Burgaw for about nine years. He graduated from the North Carolina Medical Society in 1904 and joined the Society in 1905.

Dr. J. Allison Hodges, formerly of Fayetteville, N. C., but now one of Richmond, Va.'s, most famous physicians, was recently elected President of the North Carolina Society of Richmond, Va. Mr. Henry Litchford, a well known Raleigh, N. C., banker lately located there, was elected First Vice-President.

Dr. C. Fred Williams, Columbia, S. C., had a narrow escape in the burning of his handsome home. Dr. Williams and family were sleeping quite soundly, when a passing automobile party returning from an out of town trip discovered the fire and with difficulty awakened the inmates in time to get them out in safety. The property destroyed was valued at \$12,500, with partial insurance only.

Dr. C. L. Pridgeon, for some time connected with the North Carolina State Board of Health has returned from Baltimore where he has been doing post-graduate work, and will locate in Wilmington, N. C., for practice.

The Board of Trustees of the Baptist State Hospital of South Carolina at a recent session held in Columbia, S. C., elected the following staff with Dr. James H. McIntosh, Columbia, S. C., chairman of the staff:

General Surgery—Drs. G. H. Bunch, S. E. Harmon, L. B. Owens, C. E. Owens, Lindsay Peters, J. H. Taylor. Assistants, Drs. B. D. Caughman, N. B. Heyward, D. N. Matthews.

General Medicine—Drs. D. S. Black, Ernest Cooper, T. M. DuBose, Sr., S. B. Fishburne, W. M. Lester, James H. McIntosh, D. S. Pope, H. W. Rice. Assistants, Drs. T. M. DuBose, Jr., Oscar LaBorde, J. D. Moorehead.

Eye, Ear, Nose and Throat—Drs. Henry Horlbeck, C. L. Kibler, R. L. Moore, Theo. A. Quattlebaum, E. M. Whaley.

Roentgenologists—Drs. R. W. Gibbes, Arthur E. Shaw.

Paediatrics—Dr. William Weston.

Neurology—Drs. J. W. Babcock, J. E. Poore, E. B. Saunders.

Disease of Stomach—Dr. F. M. Durham.

Diseases of Chest—Dr. C. F. Williams.

Internal Medicine—Dr. J. Heyward Gibbes.

Obstetrics—Drs. J. B. Guignard, L. K. Philpot.

Genito-Urinary—Drs. Barron & Barron, Dr. P. V. Mikell.

Scriologist—Dr. M. H. Wyman.

It is an able faculty representative of the best in South Carolina medicine and surgery and will command at the outset the respect and confidence of the profession and people.

Dr. Rolfe E. Hughes, Laurens, S. C., attended the recent opening of the new buildings of the Medical College of South Carolina, of which he is a trustee in Charleston, S. C., spending several days there with friends and attending the excellent clinics of the city.

The Seventh District Medical Society met in Concord, N. C., December 7th and 8th in the Elks' Lodge. The meeting was well attended and there was much interest manifested in the papers read.

Louisiana State Board of Medical Examiners.—At the recent annual meeting of the board, Dr. Menville, appointed by Governor Hall to fill a vacancy caused by the resignation of Dr. Williams, of Pater-son. The Board now consists of the following members: Dr. J. G. Martin, president; Dr. S. L. White, vice-president; Dr. E. L. Leckert, secretary-treasurer; Dr. Homer Dupuy, and Dr. Leon J. Menville.

Association of Seaboard Air Line Railway Surgeons.—The thirteenth annual meeting of this association was held in Petersburg, Va., on Monday, Tuesday, and Wednesday, October 19th, 20th, and 21st, under the presidency of Dr. H. A. Burke, of Petersburg. Officers to serve for the ensuing year were elected as follows: President, Dr. M. L. Wood, of Montgomery, Ala.; first vice-president, Dr. R. L. Harris, of Jacksonville, Fla.; second vice-president, Dr. Frank L. Eskridge, of Atlanta, Ga.; third vice-president, Dr. W. A. McPhaul, of Lumber-

ton, N. C.; secretary-treasurer, Dr. I. W. Palmer, of Ailey, Ga. Dr. E. H. Terrell, of Richmond, was re-elected a member of the executive committee. The association meets next year in August at Wrightsville Beach, N. C.

The following officers have been elected for the new Chester Sanatorium: Dr. H. E. McConnell, president; Dr. J. G. Johnston, vice-president; Dr. W. R. Wallace, secretary; and Dr. Robert E. Abell, treasurer.

Dr. W. B. Cox was elected chairman of the executive committee with the following other members: Drs. Abell and Wallace.

The institution will be opened not later than the first of February and perhaps earlier.

The Transylvania County Medical Society met in Brevard, N. C., on Oct. 30th. Members present: Dr. C. W. Hunt, President; W. J. Wallis, M. M. King and E. S. English. Minutes of last meeting were read and approved. Dr. W. J. Wallis reported a very interesting clinical case. The following resolutions were read and approved. First that this society as a body do everything possible to impress the people of the great importance of the better sanitation of their premises, urging that sanitary work be pushed during the winter months in order to prevent infectious diseases, especially those disseminated by flies. The most approved method for prevention of hatching of flies in any manner is to sprinkle Powdered Borax in the manure in barns and stables and then dampen with water. It is further resolved that The Town of Brevard institute proper inspection of the public Milk supply also that the cows furnishing the milk be inspected for Tuberculosis. There being no further business the Society adjourned to meet on the second Friday in December.

E. S. ENGLISH
Secretary

Dr. P. R. Terry, Asheville, N. C., returns to his work this month after some time spent in postgraduate work in Baltimore, Md.

The State Board of Health of North Carolina made a notable and most creditable exhibit at the recent state fair at Raleigh, N. C. Among the items of more than passing interest was the very care-

fully planned "exhibit" of analyses of "Eckman's Alternative," "Fruitola," "Sanatogen," "Wine of Cardui" and other commonly advertised "patents." The exhibit attracted much attention and was a constant centre for crowds.

Among the members of the medical profession recently elected to the state legislature of North Carolina are the names of two well and favorably known gentlemen in the persons of Dr. Alfred A. Kent, Lenoir, N. C., and Dr. E. J. Tucker, Roxboro, N. C. Both gentlemen sustain enviable reputations as leaders in medical circles in their respective communities, and both public and profession may rest content with matters of statecraft in such skilled and intelligent hands.

Gov. Locke Craig of North Carolina was advised on Nov. 4th by Dr. Samuel Westray Battle, Asheville, N. C., when the Governor had a few days before appointed Chairman of the N. C. State Committee of Mercy to solicit aid for the distressed Belgians, that Dr. Battle had in hand \$1,000.00 contributed for the suffering Belgians by Asheville citizens.

The admirable railway train health exhibit of the Louisiana State Board of Health with Dr. Oscar Dowling in charge, while on its way to the meeting of the Southern Medical Association in Richmond spent a couple of days at Asheville, N. C., where much interest was manifested in the exhibit. Later enroute to Jacksonville, Fla., to American Public Health Association meeting, the exhibit was shown in Danville, Va., Greensboro, N. C., Charlotte, N. C., Columbia, S. C., and other cities. It is a fine display of the work of an up-to-date modern health board reflecting much credit on its distinguished originator, Dr. Dowling.

BOOK NOTICES.

Practical Hormone Therapy. A Manual of Organotherapy for General Practitioners. By Henry R. Harrower, M. D. Sometime Professor of Clinical Diagnosis, Lovola University, Chicago; Fellow of the Royal Society of Medicine; Fellow of the American Medical Association. With Foreword by Professor Dr. Artur Biedl, Vienna. Published by the Author in New York. Price \$4.50.

Hormone Therapy, although its beginnings can be traced back to ancient times, is actually a most recent acquisition, a

practical deduction from that new sphere of biological inquiry which is concerned with the Theory of Internal Secretions. Although the book is titled, "Hormone Therapy," which is gradually being recognized in medical literature as a ready form of expression for the more cumbersome one of "therapeutics of the ductless glands and internal secretions," it deals with several closely allied subjects, bile, the lipoids, etc.

At present the application of hormone therapy in general practice is the exception rather than the rule, and the exhibition of endocrinous preparations as remedies is, in this country at least, practically confined to the use of preparations from the thyroid, pituitary, and adrenal glands. While it is admitted that much has been accomplished in the past ten years to establish the therapeutic usefulness of certain secretions of the digestive glands, the reproductive glands, and the spleen, the proportion of general practitioners who avail themselves of remedies of this character is very small, possibly not five per cent.

The principal object of this book is to broaden the therapeutic horizon and to stimulate the reader to include in his armamentarium such of the hormones as are of proved utility. Its scope, therefore, is limited to a consideration of the remedial value, actual and prospective, of these varied substances.

The book is divided into eight parts which are entitled as follows: Preliminary Considerations; The Hormones of the Digestive System; The Metabolic Glands; The Nervous System; The Reproductive System; The Vascular System; Miscellaneous; Appendix.

The reviewer has found this volume unusually interesting, partly because the subject is in a way a new one, and partly because of the excellent manner in which the author has dealt with his subject.

Dental Jurisprudence. An Epitome of the Law of Dentistry and Dental Surgery. By Elmer D. Brothers, B. S., L. L. B., Professor of Medical and Dental Jurisprudence in the University of Illinois, and Lecturer in John Marshall Law School, Chicago. St. Louis: C. V. Mosby Co., 1914. Price \$2.00.

This was prepared with a view of arranging in concise and readable form those principles and rules of law which most affect the dentist in his individual and professional capacity. It is a development of a course of lectures which the writer has been delivering to classes

of dental students since 1895, and embodies what he found most useful and interesting to the progressive, inquiring mind of the student.

The writer has confined himself almost exclusively to the legal aspect of the question involved, in the belief that the dental phase is sufficiently covered in other courses; in other words, a knowledge of modern dentistry—its achievements and efforts, is assumed.

The book will be very instructive to any practitioner who desires to inform himself on this very important subject. It contains only 220 pages of text, as the author has made it as brief as possible and yet included what was necessary in the phase of the subject that he wrote of.

Nurses For Our Neighbors. By Alfred Worcester, A. M., M. D., Fellow of the Massachusetts Medical Society; Ex-President of the Harvard Medical School Alumni Association; Consulting Physician Elliot City Hospital, Keene, N. H. Boston and New York: Houghton Mifflin Company, The Riverside Press Cambridge, 1914. Price \$1.25.

This book gives a history of nursing both here and abroad and makes a strong plea for the infusion of a more personal human interest into the nurse's work. It will be of interest not only to nurses and doctors but to all who have had or are likely to have experience in caring for the sick.

The last chapter of this book entitled, "Amateur Nursing and Neighbor Helping" is especially interesting and helpful. It tells how each of us may increase our helpfulness, and to give the right kind of help to our neighbors and others.

Pathogenic Microorganisms. (Including Bacteria and Protozoa.) A practical Manual for Students, Physicians and Health Officers. By William H. Park, Professor of Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, and Director of the Bureau of Laboratories of the Department of Health, New York City, and Anna W. Williams, M. D., Assistant Director of the Bureau of Laboratories, New York City; Consulting Pathologist to the New York Infirmary for Women and Children. New (5th) edition, thoroughly revised. Octavo, 684 pages, with 210 illustrations and 9 full-page plates. Cloth, \$1.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1914.

The appearance of a new edition of this favored and standard work is not only justified but demanded by the advances which have been recorded in this department, and which the authors have presented in complete detail. They have not, however, limited themselves to bringing this work strictly up to date, but have added greatly to its general usefulness by a substantial enlargement of the sections devoted to the practical application of this science. The revision has been so thorough that this edition is virtually a new book.

The students and laboratory worker, the sanitarian and the practitioner will find this work equally well suited to their needs. The features that have won recognition in its previous editions have been substantially amplified, while every advance has been treated in the light of the authors' unexcelled opportunities for laboratory investigation, and summarized for reference.

New sections have been added and entire chapters rewritten. The material has been quite generally re-arranged in order to bring more closely together all the pathogenic organisms. Under this arrangement, Part One deals with general characteristics and methods of study of all the micro-organisms; Part Two includes the study of individual pathogenic micro-organisms and their near relatives; Part Three is devoted to "Applied Micro-biology."

The orderliness of its arrangement, simplicity of expression, and attention to details makes this work of particular value to the student. It is a thoroughly safe guide to laboratory procedure and affords valuable details of technique not available elsewhere.

Much essential data has been added to sections devoted to the consideration of immunity, the filtrable viruses; preparation and use of media and aniline dyes. The work has a peculiar claim on the appreciation of the general practitioner. Its authors are bacteriologists who deal constantly with practical problems. It presents many points of value for him aside from its usefulness as a compendium of all that science has accomplished in this field and as a laboratory guide.

Its splendid index makes it a most convenient work of reference. It considers protozoa and bacteria in close relation to the symptoms and clinical manifestations produced by them, a point of interest to the practitioner in search of information on the practical application of this science.

The broad scope of this work is evidenced by the full consideration accorded such subjects as soil and sewage bacteria; the bacteria of industry; disinfectants; the bacteriology of milk in relation to disease; bacteriological examination of air, water and soil; and water purification.

The Trial of Jesus. Its illegality, argued by Hon. John Evan Richards, Associate Justice of the Court of Appeals for the First District of California, and its legality contended for by Dr. S. Srinivassa Aiyar, High Court Vakil of Mylapore, India, forms one volume published by The Lawyer and Banker of New Orleans, La. For sale by A. L. Chatterton Company, 354 4th Avenue, New York City. Price \$2.00. Cloth.

This book we find to be unusually interesting, the subject of course is one of the greatest in importance in the Christian world today. From it we can get a clearer idea of the real facts pertaining to the trial of Jesus than many of us ever had an opportunity of getting before. Hon. John Evan Richards gives a splendid argument from the legal standpoint setting forth the illegality of the trial of Jesus. He reviews this most tragic trial from every standpoint giving a perfect and complete exposition of the event.

Upon the opposite side Dr. S. Srinivassa Aiyar, late editor of the Criminal Law Review of Madras, upholds the legality of Christ's trial. He argues that Jesus was given a fair trial on charges which constituted an offense against the prevailing law of the Roman empire in a court of competent jurisdiction for an infraction of the law's decrees. He, naturally, treats of the same facts that Judge Richards does but their conclusions are different entirely.

Local and Regional Anesthesia, including Analgesia. By Carroll W. Allen, M. D., of Tulane University, New Orleans, with an introduction by Rudolph Matas, M. D., of Tulane University, New Orleans. Octavo of 625 pages with 255 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$6.00 net; Half Morocco; \$7.50 net.

This is the first book in our language that has attempted to survey the entire field, giving the essential elements in the successful application of local anesthesia to major surgery as well as a systematic and detailed description of the methods of anesthesia suitable to operations in

the different regions of the body.

In dealing with major operations the successful application of local anesthesia demands patience, time, and skill—a skill that can only be acquired and exercised on the human cadaver by those who, being anatomists, can alone survey the field of operation with fluoroscopic eyes. For this reason the practice of peripheral anesthesia, especially in its neuroregional aspects, appeals most pointedly to the young, ambitious, and well-trained surgeon, who, fresh from the anatomic laboratory, finds here, as nowhere else, an immediate and practical application for a knowledge that he has acquired at the cost of long nights of vigil, labor, and thought.

This volume is certainly the best upon this subject from every standpoint that we have in this language. The arrangement, the style of writing of the author, the matter used, the quality and quantity of illustrations, the paper, binding, etc. could scarcely be improved in any way. The author as well as the publisher is to be congratulated.

(Book Notices Continued on page 409)

Abstracts of the Leading articles of the month.

A New Surgical Treatment of Epilepsy.—Momburg and Volland (*Deutsche medizinische Wochenschrift*) state that, having found it practicable in a case of epilepsy to arrest convulsions by exerting pressure with the thumbs on the carotid arteries, they undertook to secure a more persistent beneficial effect by partial ligation of these vessels, thus overcoming the excessive irritability of the brain in epilepsy by diminishing the local blood supply. In two cases both common carotids were surrounded with a loop of one silver wire, which was then tightened until pulsation in the corresponding temporal artery had almost ceased, and fastened. The first patient, who had had one or two seizures every day, had two more brief convulsive attacks one week after the operation, but none after that. The second patient was permanently relieved of his previous fortnightly seizures and violent headaches. No untoward effects followed the operation save somnolence for one day and moderate dysphagia for two or three days.

Cancer of the Duodenum and Small Intestines.—Bland-Sutton, in *The London Medical Lancet* says, that a study of the effects produced by cancer of the duodenum shows that the time-honored division of this section of the small intestine into first, second, and third parts is of little use for the purposes of clinical medicine. It is more convenient, following Sherren, to call the portion above the bile papilla, the ampullary, and the remainder the infraampullary segment. Cancer arising in the duodenal mucous membrane around the bile papilla is known as circumampullary cancer, in order to distinguish it from cancer arising in the ampulla or in the common bile-duct, but the three varieties lead to obstruction of the bile-duct, jaundice, and distention of the gall-bladder. There can be little doubt that cancer of this section of the duodenum would often escape detection if it were not for the obstruction it offers to the flow of bile from the common duct. It is very difficult to distinguish clinically between circumampullary cancer, ampullary cancer, and malignant disease of the head of the pancreas, for all give rise to obstructive jaundice, often associated with an overdistended gall-bladder. Primary carcinoma of the ampulla is interesting in itself and exhibits some remarkable peculiarities. Nowhere in the body does so small a growth lead to such grave interference with digestion. A cancerous growth, sometimes no larger than a cherry, will block the outflow of bile and pancreatic juice, and cause intense jaundice and great emaciation by interfering with digestion in consequence of the obstruction to the outflow of pancreatic juice. The three clinical signs of cancer of the ampulla are painlessness, intense jaundice, and great emaciation. The pathological features of the disease are its slight tendency to infiltrate surrounding structures, the infrequency of dissemination, and the enormous dilatation of the main bile-ducts and the gall-bladder. A feature of cancer of the ampulla which distinguishes it from cancer of the gall-bladder is the infrequency with which it is associated with gallstones. The transverse or infraampullary duodenum is the common place for duodenal cancer. The symptoms associated with it are like those set up by cancer of the pylorus, but the vomited matter contains bile and pancreatic juice and is sometimes very offensive. The simple tumors arising in the intestinal walls may be lipomas; some are described as myomas, and many as sarcomas, but whatever the structure the constant propulsive efforts of the intes-

tine tend to force the tumor towards the lumen of the bowel until it projects withing it, covered merely by a layer of mucous membrane. The danger to be feared from such a tumor is invagination or intussusception of the gut, for the tumor acting as a foreign body is urged along the bowel, and being fixed to the bowel wall drags it in and produces an intussusception which, if unrelieved by art or the timely sloughing of the intussusceptum, ends in fatal obstruction. Cancer of the small intestine may arise in an accessory pancreas. Small detached masses of pancreatic tissue have been detected in the stomach near the pylorus and in the duodenum; they may be situated in the mucosa, the muscularis mucosa, or in the muscular layer of the intestine, and measure 3 or 4 centimeters in diameter. An accessory pancreas is occasionally situated at the apex of the diverticulum. The ileocecal valve, notwithstanding its narrowness, is rarely attacked by morbid growths. The hyperplastic form of intestinal tuberculosis is most common in the cecum and cecal end of the ileum. It differs from other varieties of tuberculous disease in that the lesion is not destructive and leads to an increase in the bulk of the part affected. From the operative point of view the distinction between cancer and hyperplastic tubercle is not important, for the treatment in both conditions is the same—excision; but the distinction is a matter of great concern in regard to prognosis. Cancer and hyperplastic tubercle left to run their course end fatally, but the latter is curable by excision. Melanosis is a morbid condition of the mucous membrane of the colon that has received little attention. Although the pigmentation begins, as a rule, at the ileocecal valve and extends to the anus, cases have been observed in which it does not involve the whole length of the colon. When the colic membrane is involved throughout the pigmentation is discoverable at the anus by means of a speculum. The condition is mainly a clinical curiosity, but if detected in the course of a clinical examination it might have an undue significance attached to it.

Relief of Lumbago by Manipulation and Active Movement.—Haig (*British Medical Journal*) decided to try the above method. The doctor has the patient sit erect with his back to the physician and then deeply kneads the lumbar muscles on each side of the spinous processes. A painful area is usually found somewhere

in the medium line or to one side of it. He next fixes the part of the vertebral column below this painful region by firm pressure of the thumbs on each side of the spine and then makes the patient perform strenuous movement in every direction including rotation. The result is cure of the attack at a single sitting in almost every instant.

Sublingual Medication.—Paulson, in *The British Medical Journal*, calls attention to the great usefulness of this method and to the fact that it seems to be so little known. Any soluble medicament, especially the alkaloids are even more readily absorbed from the mucous membrane beneath the tongue than from the subcutaneous tissue, furthermore it is safe, cleaner and quicker. The doctor says that in the South African war, it was used extensively and that one physician told him, that he could treat fifty wounded and suffering soldiers in the same length of time that he could prepare to give a hypodermic to one.

Bates (*Journ. of Trop. Med & Hygiene*) gives 30 grains of quinine daily to the average case of malaria. In the pernicious types from 60 to 120 grains a day may be given but for no longer than 24 hours; the dose is then reduced to 45 grains and in a day or two to 30 grains. Serious symptoms indicating, in an average case, an increase in the dose to 45 or 60 grains are: the appearance of full grown, presegmenting or segmenting parasites in the peripheral blood, unusual viscosity of blood as seen on puncture, and mental observations. When the parasites disappear from the circulation, even if the symptoms persist, quinine is useless and should be discontinued. The 30-grain doses are given in two 15-grain fractions, both in the afternoon. The 45 and 60-grain doses are given in 3 and 4 15-grain fractions and larger amounts in 10-grain doses every two or three hours. Oral administration of quinine is more effectual than the hypodermic and when vomiting occurs, the drug should be re-administered, after each injection, in 10-grain doses together with small injections of morphine and hot sinapisms.

To prevent relapse 30 grains of quinine should be given daily on three successive days of each week for six to eight weeks.

Bronchogenous, Placentogenous, Dermatogenous, and Enterogenous Infection With Tuberculosis in Infancy.—Von Pirquet (*Edin. Med. Jour.*) says that the

question of tuberculous infection in infancy has formed the subject of an investigation during the past ten years at the university clinics. "Permit me to say at the beginning that of all the 131 cases, which were under our clinical observation, in all of them the tubercle bacilli apparently entered the body through the respiratory organs and caused a first lesion in the lungs. * * * The primary infection of the intestinal canal—enterogenous infection—has been much overestimated after Behring's theory of infection by cow's milk." The author admits that intestinal lesions are common, but contends that a careful search will always reveal a primary focus in the lungs and a more advanced process in the bronchial than in the mesenteric lymph glands. "A certainly proved intestinal infection is rare. Albrecht found it to be only 0.7 per cent. and Ghon 1 per cent." It may be that the widely different figures of English and American investigators is due to the fact that raw milk is used so much more frequently in those countries than it is in Austria. Tonsillar infection was found in only 0.3 per cent. of 1,060 cases examined by Albrecht. Ghon found one case in 139 examined at autopsy.

The writer believes that no proof has been furnished that germinal transmission of tuberculosis can occur, but infection through the placental vessels certainly does occur in a few instances. Aspiration of the amniotic fluid has caused a pulmonary infection. At the best, however, foetal infection is very rare.

He urges in conclusion that, since bronchogenous infection is by far the most frequent method of transmission of tuberculosis during the first year of life, prophylaxis should consist mainly in separating the infant from coughing tuberculous adults.

A Bacteriological Study of Tuberculosis of the Lymph Glands in Children.—Mitchell, in *The Edinburgh Med. Jour.*, mentions the results of the examination of the glands in a series of seventy-two cases of tuberculous cervical adenitis occurring in children under twelve years old. Eight more cases have since been added, and of this total number of eighty cases, bovine tubercle bacilli were recovered on seventy-one instances, giving a percentage incidence of 88.

Opportunity has since then occurred to examine material removed at autopsy from twenty-nine tuberculous children. Cultures were obtained in twelve instances; eight times being the human

type of bacillus, and four times, the bovine. Of the four cases in which the bovine bacillus was isolated, three times the immediate cause of death was tuberculosis; in the fourth, the child, sick with tuberculous peritonitis, died of "intraperitoneal hemorrhage." In every instance, the mesenteric glands were apparently the primary site of the disease.

Material removed from eight living cases of abdominal tuberculosis has also been examined. These cases all occurred in children under twelve years old and were instances of infection of the mesenteric glands or of the peritoneum, cases of generalized tuberculosis being excluded. Bovine bacilli were isolated in seven of the number and human bacilli in the remaining child. In this latter case, the father suffered from chronic pulmonary tuberculosis.

The doctor says: "Having demonstrated that a considerable proportion of the tuberculosis affecting children in Edinburgh and district is of bovine origin *** that the milk supply of the same area is frequently infected with bovine tubercle bacilli, and having demonstrated that a certain number of deaths occur from this bacillus, I am of opinion that bovine tuberculosis can no longer be considered a negligible factor."

Diet in Diseases of the Heart, Vessels and Kidneys.—Dr. Karl Frenkel gives a useful summary or recent work on this subject. With regard to the heart, the object of dietetic treatment is to strengthen and maintain its muscular capacity. So long as there is likely to be active endocarditis the patient should be placed on fever diet, with restriction of fluids.

In chronic heart disease the aim is to bring the patient into a normal state of nutrition, and to keep him there. Superfluous fat makes the work of the heart difficult, and leads to its early failure. Defective nutrition is equally injurious. Eppinger has shown that in this condition an hypertrophied gives way before a sound heart. In obese cardiac patients dietary restriction should not be carried beyond a certain point, and further removal of fat should be gradually accomplished by carefully regulated exercises. Only if the patient is unable to get about should dietary restrictions for the removal of fat be actively pushed.

Oertel advised a diet rich in proteids, up to 150 grammes per diem, but latter authors limit the amount from 80 to 120 grammes. All authors advise either a very limited use of alcohol, or total

abstinence, especially from strong alcoholic drinks, e.g. brandy and liqueurs. Beer is inadvisable, not so much on account of its alcoholic content, but because of the amount of fluid, and of the sugar it contains, which provides superfluous nutrient material. Strauss advises coffee, especially prepared to diminish the amount of caffeine. Weak tea, coffee and soups may be taken in large amounts, unless contraindications exist. The use of tobacco must be strictly limited.

With regard to the amount of fluid, in well-compensated heart disease, most writers restrict the quantity; some insist on fluid being taken only at meal times, whilst others make no restriction. The balance of evidence seems in favour of a moderate restriction of fluid.

In failure of compensation meals should be small, and intervals of feeding more frequent. In view of the failure of the digestive juices, and of the loss of appetite, the food must be varied in character, in order that the patient may be induced to take enough to maintain his nutrition and that of the heart-muscle, which is the all-important point. In acute heart failure the temporary stimulating effect of alcohol should be utilised. In the milder forms of disturbance of compensation, such as dyspnoea and nocturnal micturition, in addition to rest in bed and the administration of cardiac tonics, the amount of fluid is to be limited to $1\frac{1}{4}$ or 1-2 litres daily. This restriction of fluid increases the efficacy of digitalis. Spices and salt should be forbidden, the elimination of the latter by the kidneys is difficult, and in the most severe cases of heart disease may fail as it does in parenchymatous nephritis, whilst retention of salt leads to retention of water in the tissues. Whilst in mild disturbance of compensation restriction of fluid seems to promote recovery, V. Noorden, Kraus and Strauss consider that it does not do so in severe cases, and they remove all restriction if the patient suffers much from thirst, or is losing his appetite.

For severe cases of cardiac dropsy, in which digitalis has failed, the milk cure, first employed by Karell and since modified by Lenhartz and Jacob, has come into general use. For five to seven days the patient takes 300 cc. milk, hot or cold, four times daily, at four hourly intervals. Nothing else is taken, he stays in bed during the whole cure. Generally a pronounced diuresis sets in on the third or fourth day. The condition of the blood pressure varies. During the next two to six days, between the feeds of milk, an

egg, rusks, some black bread, vegetable soup and meat is allowed. On the thirteenth day he returns to his ordinary diet, with the exception that for two to four weeks the total daily quantity of fluid is limited to 800 cc. If the first cure is not successful, a repetition of it after two to three weeks, with the administration of cardiac tonics, often brings about the desired results. Causes of failure of the cure are that the heart disease is far advanced, or is complicated by nephritis or uraemia. The success of this treatment is attributable to the rest given to the organs of digestion and assimilation by the temporary restriction of nutriment and fluid, and to the absence from the food of salt and of irritative substances.

With regard to arterio-sclerosis, there is nothing fresh to report as to dietetic treatment. Most authors advise the limitation of proteid foods to an amount not exceeding 60 to 80 grammes daily, with the use of milky foods, vegetables and nuclein-free foods. When symptoms appear many recommend an exclusively milk diet for two weeks.

Opinion is practically unanimous as to the advisability of restriction of salt in all forms of nephritis, especially in those forms in which there is oedema, or any tendency to it. As regards food, this is attained by (1) baking bread without salt; (2) using butter made without salt; (3) limiting the quantity of milk to 1 litre or less daily; (4) all cooking to be done without salt; (5) soups and broths are forbidden; (6) vegetables to be washed a long time in water before cooking.

In cases of contracted granular kidney without uraemic symptoms, the daily amount of proteid should be reduced to 80 grammes. 80 to 110 grammes in considered necessary by V. Noorden, and every week on one day only 20 to 30 grammes is allowed. The latter amount would be contained in a dietary composed of bread, cereal foods, fruit, vegetables, butter, and half a litre of milk. Less proteid than the above is insufficient to maintain the nutrition of the cardiac muscles, one of the most important considerations in chronic renal disease. In order to dilute the uraemic poisons, as well as to wash out the tissues, Strauss endeavours to excite free diuresis. For this purpose he gives in contracted kidney with good cardiac compensation, and in the first stage of chronic uraemic, enough fluid to produce a daily flow of 1500 to 2000 cc. of urine. If at the onset of uraemia so much fluid cannot be taken by the mouth, he orders, even in the pres-

ence of oedema, drop-instillation of pure water per rectum. If heart weakness threatens the amount of fluid drunk is reduced by half to three-quarters litre, or the Karell milk cure (see above) is instituted. If heart weakness and uraemic symptoms occur simultaneously, the former is treated by rest and digitalis, and the amount of fluid ingested is not diminished. Herz advocates a similar course of treatment. V. Noorden is against the use of such large amounts of water, because he thinks that it may lead to heart failure early in the case. He allows the patient sufficient water to keep the quantity of urine at 1300 to 1500 cc., because the researches of Mohr and Dapper shows that nitrogenous excretion is not hindered until the daily quantity of urine falls below 1250 cc. Every week the patient is allowed to drink as much water as he pleases on one day, and if the heart condition is good, for a period of fourteen days in every two to three months a "drinkcure" is carried out, the patient taking two to three litres of water daily. Noorden justifies the restriction of fluid by his observation that it brings about a fall of blood-pressure from 30 to 50 mm. Hg. Other writers think the best results in cases of contracted kidney are given by following a middle course, and allow 1 1-2 litres of water per diem.

In acute glomerular and parenchymatous nephritis, in the exacerbations of chronic parenchymatous nephritis and of chronic interstitial inflammations, the excretion of water by the kidney is disturbed, as a primary symptom, and careful consideration of this factor is needed. If too much fluid is given, the results is an increase of oedema. The amount of fluid should therefore be restricted, so far as the patient's thirst, which is often great, allows, to about 1500 cc., and elimination promoted by vapour baths, until a spontaneous diuresis is established. When diuresis is free all authors advise administration of abundant fluid. —Bristol (England) Medical Journal.

Pyloric Obstruction in Infants.—Miller (London Lancet) says that this condition is more common in males. The symptoms commonly begin in the second month, and consist of forcible vomiting, visible gastric peristalsis, wasting, and constipation. As to the presence of a palpable pyloric tumor the author is rather sceptical. He has felt a hard cylindrical tumor in certain cases, especially during gastric peristalsis. But it is

impossible to palpate deeply in many cases, and in some cases of wasting with a lax abdominal wall the author has felt a similar tumor. The doctor believes that the palpability of the pylorus rather as a sign of wasting than of pyloric hypertrophy. The medical treatment consists in (1) keeping the patient warm; (2) washing out the stomach, and (3) feeding with predigested milk. Drugs are occasionally useful. When there are much colicky writhing and abdominal tenderness the author gives tincture of opium, 1-4 minim three times a day for two or three days. The doctor has tried belladonna, but has found it useless in this disease. The bowels must be kept open; an occasional dose of castor oil followed by gray powder will often be sufficient. Phenolphthalein is perhaps the most satisfactory drug to use regularly. In the very bad cases medical treatment only can be recommended. When such patients begin to improve and are strong enough to stand an operation a surgeon might give his opinion once more. If the condition remains stationary for long or begins to decline after an initial improvement a surgeon should be called in.

Treatment of Chronic Mucocoele.—Niven Robertson (London Practitioner) refers to chronic mucocoele as being, to all intents and purposes, merely a pyogenic abscess of the lacrymal sac, with complete or incomplete obstruction of the nasal duct. To promote drainage of the sac after making an artificial slit in the inferior canaliculus, the author has had made a small silver tube, the outer end of which is a semicircle or gutter that rests in the slit while the inner end is a complete tube which is inserted into the inner unslit part of the inferior canaliculus. To retain the tube in position a small hook is provided at the junction of the gutter and the circular part of the tube, which hook rests on the skin over the outside of the sac. In the treatment the silver tube is inserted into the canaliculus daily and the sac syringed out through it with half strength hydrogen dioxide solution. This is done several times, till the contents of the sac, pressed out through the tube, are clear. The hydrogen dioxide causes some temporary reddening and irritation of the mucous membrane of the inner canthus, and bubbles profusely—oxygen being liberated—in contact with the silver of the tube. The irritation leads to an increase of blood supply to the sac and its vicinity. The patient is instructed to squeeze the

contents of the sac out several times daily by pressure with his thumb, and before he leaves, a small quantity of an ointment of five grains (0.3 gram) of yellow oxide of mercury to the ounce (30 grams) of base is inserted with a glass rod into the inner canthus and as much of it as possible massaged into the sac. In a large number of cases this treatment, assiduously carried out, brings the sac to a healthy condition and restores permeability of the nasal duct. Where this does not result the nasal duct is dilated with probes and lead style inserted to maintain its patency. The silver tube greatly facilitates washing out the sac, and prevents the formation of false passage by the nurse in making rough attempts to pass a syringe directly down the canaliculus. If the left in charge of the case, she was merely to insert the end of Anel's syringe into the mouth of the canaliculus tube. The author has also left the tube in situ several hours as a drain preventing the cut edges of the slit from uniting, through only in hospital cases where it could be watched. Instead of hydrogen dioxide a solution of zinc sulphate, one grain (0.06 gram) to the ounce (30 c. c.), may be used to syringe out the sac.

Treatment of Bronchiectasis and Chronic Bronchitis.—Singer (Therapeutische Monatshefte) reports benefit in bronchiectasis and in all bronchial affections, with abundant expectoration by systematic restriction of the fluid taken by the patients. The method consists in reducing the daily quantity to 600 c. c. (20 ounces) for three successive days, removing the restrictions on the fourth day, then restoring them for three more days, etc. The amount of fluid allowed on the days of fluid restriction is gradually carried down to 400 or 200 c. c. (12 to 6 ounces). The solid diet permitted is ample, including fruit and vegetables. Under this treatment the amount of sputum visibly diminishes and its consistency is increased. In many cases, the treatment led not only to temporary betterment but, after repetition of the periods of fluid restriction, to complete relief from affections of years' standing. Cases of bronchial disorder of syphilitic and tuberculous origin—the active process having subsided—also proved amenable to the treatment; likewise cases of bronchial asthma with a paroxysmal rather than permanent increase in expectoration. The results obtained in these cases tend to show that the effect is not produced by a mere drying out of the tissues, but through osmot-

ic changes to which the reduction of fluid leads. This surmise is corroborated by the fact, observed both by the author and others, that intravenous injections of hypertonic salt solution yield like favorable effects.

The X-Ray Treatment of Ringworm.—Oram (Liverpool Medico-Chirurgical Journal) says that a year ago an X-ray clinic was instituted by the Education Committee of the Liverpool Corporation, and during the past year 150 children have received treatment. Taking the period from August to December last year, during which period forty-two children came for treatment, 35 of these were cured at the first exposure—i. e., 85 per cent.; and the average time which elapsed between the time of their first attendance and their being certified as free from ringworm and able to attend school, was just under four weeks. The other 15 per cent. had to receive a second treatment, and the average time for these between their first attendance and their cure was twelve weeks.

One child developed an eczema of the scalp outside the area treated, and the writer thought it well to discontinue the treatment lest it should be held responsible. Otherwise all cases were cured within the three months' period. The doctor says that no other form of treatment can hold out promise of such speedy or certain results, and when in addition it is considered that the manipulation is carried out entirely by the medical man, and that in a period of about half an hour, and that the co-operation of the parents, which is frequently difficult to obtain amongst the very poor, is not an essential detail, one can not fail to be impressed with the value of this method.

A Method of Opening the Abdomen for Appendectomy.—Edington (Brit. Med. Jour.) describes a method the underlying principles of which are: (1) Division of the posterior sheath of the rectus transversely, in the direction of the aponeurotic fibers, and (2) preservation of the muscle itself to form a support to the scar. This method consists in exposing the rectus muscle, loosening it in its sheath, retracting towards the middle line, and transverse division of the posterior sheath and peritoneum. After the appendix has been removed and the posterior sheath and peritoneum sutured, the rectus is allowed to fall back into its normal position, and the anterior sheath and superficial wound closed. Edington has

performed this operation in close to 100 cases, and where there has been primary closure of the incision the results, as regards absence of hernial protrusion, have been absolutely satisfactory.

Overhauling the Automobile.—Buist (British Medical Journal) states that motor cars are curious things, in that as far as matters of habit go they seem to be alive. Thus a car may work quite reliably day after day for weeks at a spell, doing a given series of rounds, calling a halt every mile or two, as does the average doctor in the exercise of his profession. But if the same car be asked to go fifty or seventy miles without a halt it is ten to one that some minor part of the mechanism fails in the most annoying manner, leading to a breakdown involving a loss of hours.

Preparatory to a lengthy run the machine will want looking over in a more special fashion than is done ordinarily in connection with its daily work in the doctor's service. Under these conditions it does not go on long enough at a spell to run any serious risk of damage even should there be insufficient oil in the back axle or gearbox, or lack of grease in the universal joints. In most such cases ample warning would be given by way of gradually increasing squeaking. Before starting out, however, all those points should be specially checked. It is besides as well to unscrew the valve caps and have a look at the condition of the engine's interior in regard to carbon deposit.

Assuming, therefore, that the motor is clean and that it will be given a reasonable chance of keeping clean by drawing off the oil from the crankcase; that it has been replenished with new and clean supplies and is not suffering from loss of compression, and that all water connections and all other parts where leaks might occur have been looked over; a start may be made with a fair certainty of having no motor trouble.

In regard to the chassis in general, apart from such ordinary attention as the filling of grease cups at regular intervals, one should pay particular heed to the universal joints in connection with the propeller shaft. It is particularly essential that the grease put into the joints at either end of the propeller shaft is adequately secured in the covering to those connections. If these parts are run dry, sooner or later a broken propeller shaft joint will be sustained, than which there is scarcely any form of motor accident

more dangerous. If the fore end goes it drops like a pole, which the back axle has to jump.

Brakes should be gone over, particularly with a view to ensuring that they are acting in an absolutely compensating fashion, the pull being equal on either back wheel. It is as well to take up any slackness of the steering and particularly to supply all steering joints with lubricant. Next, as the car stands in the garage the wheels should be checked for alignment. If a wheel be ever so little out of true tires wear in extraordinarily quick time.

Runs longer than those usual in the execution of the doctor's daily work demand, also, attention to the tires. The medical man will save money by taking off all tires showing any appreciable wear, and replacing them with new shoes before starting out on a run the length of which can not be foreseen. The old shoes can be brought into use again afterward and worn to the ordinary limits. Attention to all of the above details is necessary from time to time even if no unusual long tour is contemplated.

Treatment of Carcinoma of the Tongue.

—Spencer (Brit. Med. Jour.) says that the best way of recognizing that an epithelioma has begun, and its extent, is to have a microscopic section made immediately whilst the surgeon waits. This avoids the very real objection that the patient may refuse to undergo a second operation until too late. Guided by such an immediate section, the surgeon must then remove sufficient to include all the small cell infiltration, and if an epitheliomatous downgrowth into a subepithelial tissue is found, he must then proceed to remove the contents of the corresponding anterior triangle. In doing this, if the mylohyoid muscle and hypoglossal nerve are not injured, the patient will recover good articulation, and, as the wound does not communicate with the mouth, it may be expected to heal by the first intention. This is a reliable procedure so long as the epithelioma has not extended beyond the subepithelial connective tissue, because the epitheliomatous infection has as yet passed through the lymphatics to the corresponding glands without being arrested in the curse of the lymphatics. If it fails, the reason is that there has been such a widespread invasion from the first that even the most extensive operation would be useless, as instanced by cases which were quoted. When epithelioma has invaded the muscular substance of the

tongue and also the lymphatic glands, it is then that an excision en masse or en bloc becomes necessary. There is then a risk of death after the operation, and deformity follows, varying with the extent of the operation. In the less malignant cases there is a prolongation of life, but, the three years' limit passed, there is still no certainty that late recurrence may not supervene. In the more virulent cases life is prolonged for a year or so; the most painful feature in this class of case is the suffering endured after recurrence has set in. A few cases of limited recurrence are benefited by secondary operations.

Zoniform or Segmental Naevi.—Adamson (The British Journal of Dermatology) says that a zoniform nevus may be composed of any of a number of elements of the skin, such as pigment, hair, blood-vessels, lymphatics, unstriped muscle, sweat glands, and sebaceous glands. Zoniform naevi are not of necessity unilateral; they may be bilateral, symmetrical, or unsymmetrical. Features common to all naevi, as well as zoniform naevi, are their tendency to appear not at birth, but some time afterward; they may at times disappear; they may frequently be associated with other congenital deformities; they may involve mucous membranes and have an unexplained tendency to inflammatory periods. There is probably a close relationship between the various forms; the ordinary linear warty nevus may be found to arise primarily from a lymphangiectasis and telangiectasis.

Meningitis in Syphilis and Its Treatment.—Jeanselme, Vernes, and Bloch (Bulletins et memoires de la Societe medicale des hopitaux de Paris) lay stress on the frequency with which a meningitic reaction occurs in syphilis and on the important bearing of such reactions on the prognosis and therapeutic management of all syphilitic cases. The danger that mild meningeal involvement may rapidly pass into grave nervous disease, the circumstance that syphilitic foci in the nervous tissues are most difficult to reach by antisiphilitic treatment, the fact that early meningeal syphilis can seldom be detected through ordinary clinical observation, demand that the cerebrospinal fluid be directly examined and tested. They think it necessary to make sure in all cases of syphilis, as early as the secondary stage, that the meninges are not involved. As regards treatment, they have become convinced that salvarsan,

used cautiously, can be administered without danger in syphilitic meningitis, and moreover, that in a certain proportion of cases a complete cure can be thereby effected, all signs of meningitis, as revealed in the cerebrospinal fluid, including the Wassermann test, remaining constantly negative after the treatment. They report a small number of cases showing their contentions to be well founded; the effects of treatment on the blood Wassermann as well as on the lymphocytes, albumin, and Wassermann of the cerebrospinal fluid are tabulated in each instance. In every case of syphilis they now give weekly intravenous injections of 0.3 to 0.5 gram of salvarsan until all tests in both blood and cerebrospinal fluid have returned to normal. As it is known that salvarsan enters the arachnoid space only with great difficulty and in minute amount, they have lately also been administering neosalvarsan in subarachnoid injections. A preliminary solution is made (extemporaneously) of 0.01 gram of salvarsan in fifteen c. c. of distilled water; one c. c. portions of this solution are then mixed with nine c. c., four c. c., and one c. c., respectively, of distilled water, thus yielding solutions containing in each c. c. 0.001, 0.002, and 0.005 gram of the drug. Small doses of 0.00025, 0.0005, and 0.001 are at first injected, then larger doses, increased from the previous amount at weekly intervals; 0.005 has been the largest dose used so far. On the whole, they consider it proved by their results that energetic treatment, begun at the beginning of the secondary stage and continued under Wassermann and lumbar puncture control, possibly preserves the syphilitic patient from subsequent manifestations of parasyphilis.

Therapeutic Value of Digitalis in Complete Heart Shock.—Rudolf and Longhead (Archives of Diagnosis) report a case of complete heart block, ultimately fatal, due to fibrosis of the bundle of His, apparently of non-syphilitic origin. Although in a previous case the pulse rate had risen from 38 to 68 in four days upon administration of 15 minim doses of tincture of digitalis every three hours, in the present case a purified digitalis powder given in approximately equivalent doses for twelve days had practically no effect on the rate, the auricular rate remaining constant at 75 and the ventricular increasing only from 23 to 25. A great improvement occurred, however, in the patient's general condition. Before the digitalis was given he had been having sev-

eral fainting attacks daily, but during the twelve days of the administration and for two days after the drug was discontinued, he was quite free from them. They then returned and the patient begged to have the drug given again. It was resumed (though given only twice daily instead of three times as before), but six days after the original full dose had been discontinued the patient died in an attack. On the day before death the pulse rate had been about 70 and the rhythm irregular.

Immediate Proof of Death.—D'Halluin recommends, as a rapid way to establish death, the instillation of ether into one eye, the other serving as control. Where rubefaction appears, life is certainly present. No failure of this method has been observed by the author; he admits, however, that in the case of greatly slackened circulation, the eye might fail to reddens though life might exist. A negative result is thus not absolutely conclusive evidence of death, though a positive result definitely shows life. During the test the subject should be placed on the back, to favor circulation in the head. Icard's fluorescein test is valuable, providing a good quality of the drug is used. The solution employed consists of fluorescein, twenty grams; sodium carbonate, thirty grams, and distilled water, enough to make 100 grams. Icard's method is to inject eight to ten c. c. under the skin. If life exists the skin and mucous membranes—especially the conjunctivae and the buccal mucosa beneath the frenum—become yellowish, and the humors of the eye and the urine, greenish. D'Halluin improves upon this by injecting five c. c. (ten c. c. would, however, not invalidate the test) into a vein in one of the lower extremities. This test is extremely sensitive and the intravenous method renders it absolutely accurate for all practical purposes. A third method which the author recommends is to introduce a grooved director or blunt needle down to the heart. If the needle fails to show rhythmic movements, heart action has ceased; if the heart is still excitable, up and down movements of the blunt needle will stimulate it to resume beating. The relatively slight danger of injuring the heart entailed in this procedure is counterbalanced by its simplicity and reliability.—*Revue Medicale de la Suisse Romande*.

The Action of Drugs in Heart Failure.—Turnbull (Australian Medical Journal) states that of recent years much work

has been done, both experimentally and clinically, in the effort to determine by precise methods the action of drugs upon the heart. It is perhaps not too much to say that the only drugs in general use which have a definite and demonstrable effect on the heart are those of the digitalis group. The supposed effects of strychnine, camphor, and the like cannot be actually demonstrated, and remain still a pious belief of the clinician, though efforts are constantly being made to show some definite action. Mackenzie has pointed out that it is rare for a tincture of digitalis, procured in the ordinary way from a reputable druggist, to be inert, but that the reaction of the heart to the drug varies with the nature of the lesion, and his own and other observer's work has established this latter fact thoroughly, and has provided us with some definite knowledge to aid us in using the drug. It is here perhaps that the polygraph will usually prove amply sufficient as a guide to the results of digitalis in treatment. The best results from digitalis treatment are, of course, got in cases of auricular fibrillation, especially where the lesion is an old, rheumatic one, but at times, in cases of this form of arrhythmia, remarkably good results may be obtained even in the hearts of old people, and in those in whom the lesion is due to a toxin—e. g., exophthalmis goitre.

In spite of such careful work by many observers, the probable results of digitalis administration in cases in which the rhythm is normal are very difficult to forecast, but there is undoubtedly a definite action on heart muscle as well as a powerful vagal stimulation, as is shown by the inability of atropine to remove all the results of digitalis. Until our knowledge is much more precise, the wisest course to pursue is to use digitalis in all cases of heart failure with dilatation and dropsy, no matter what is the state of the heart, provided rest and good general treatment fail to allow of the recovery of the organ. In any case in which it is definitely considered that digitalis is indicated, and should react favorably, it is essential that the drug be pushed until the symptoms of poisoning—e. g., headache, nausea, giddiness, etc.—are produced, before it is discarded as useless. It is not uncommon to see cases of auricular fibrillation which have failed to react to a dose of tincture of digitalis, 10 minims, t.i.d., continued for some weeks, react promptly and satisfactorily to twice the dose. Of course, if a perfect result is obtained earlier, there

is no need to push the drug till unpleasant symptoms are procured, but often the symptoms are noted before any cardiac effect has become obvious. The drug is then stopped for a while, and the pulse is frequently found to be slowing satisfactorily and the symptoms of heart failure disappearing, the improvement having apparently set in almost immediately after the onset of the symptoms of full drug dosage. As soon as the symptoms of full dosage appear, the drug should be withheld for a day or two, and then given again in smaller doses, just sufficient being used to retain good effects.

It is doubtful whether any absolute contraindication to digitalis exists, since in some cases in which it produces undesirable symptoms or signs its omission is accompanied by progressive heart failure, but certain signs are danger signals and indicate that the drug must be stopped if possible, or at least used with very special care. The chief of these are:

(a) Partial heart-block or increased a-c interval, due to an incomplete lesion of the a-v bundle. In these cases digitalis, partly by a direct muscular action, and very largely by its action on the vagus, increases the difficulty of conduction, and may increase the block or cause a previously lengthened conduction period to increase, till some impulses are blocked. Frequently where there is heart failure, the patient may feel much relieved while under digitalis, in spite of the increased difficulty of conduction, and the drug may need to be continued, though at times a combination with atropine is successful in abolishing the vagal effect.

(b) Pulsus alternans. In cases in which this condition is present, digitalis should be used very cautiously, and only where the patient is under careful observation. It often happens that the patient feels distinctly improved for a day or two and then complains of a feeling of exhaustion, which increases while the drug is continued. This is a symptom of great gravity, and if not attended to fatal results may ensue.

(c) Extrasystoles have been said to be banished by digitalis, but the much more common experience is that their numbers are increased by the drug, and its administration may certainly be followed by their appearance in cases in which they were previously absent. In cases of auricular fibrillation the well-known coupled rhythm produced by digitalis is due to the incidence of a centricular extrasystole following each response to

supraventricular stimuli and in these cases the appearance of the premature beats must be regarded as a danger-signal, as several sudden and unexpected deaths have occurred in such cases, probably from ventricular fibrillation. At times the symptoms of heart failure become marked again immediately the drug is stopped, but here the physician must use his own judgment in each individual case, or decide which of two evils is the greater, but it is extremely important that he should at once recognize the coupled beat and appreciate its significance and dangers.

High blood-pressure was at one time considered to be a contraindication to digitalis, but much evidence has accumulated in opposition to this view, and there is no doubt that cases with very high blood-pressure are frequently greatly benefited by the drug. In many cases at least the blood-pressure rises as the heart fails, and if the heart is slowed and strengthened the circulatory balance is readjusted and the blood-pressure falls again. The administration of digitalis will only very rarely be found to cause an appreciable rise of blood-pressure in clinical cases.

Myocardial degeneration is certainly no contraindication to the use of digitalis, which often is of great value in cases in which the heart muscle is much degenerated. The value or otherwise of digitalis to a heart laboring in the grip of a toxin is still uncertain, and much work requires to be done to settle this point. However, we know it may be of great value at times in exophthalmic goitre and pneumonia, and at times also in acute rheumatism, and there is no doubt that it should be thoroughly tried where the heart progressively failing in spite of treatment in any acute disease.

The other drugs of the digitalis group act similarly, but less strongly and certainly than digitalis, and no advantage seems to be got by their substitution for it.

Through *strophanthus* and *squills* seem less liable to irritate the stomach, they are apparently more irritant to the intestine. *Strophanthus* is less readily absorbed from the intestine than digitalis, and this irregularity and difficulty of absorption make it more difficult to handle effectively, and usually much larger doses are required, while *squills* is irregular in absorption, weak in action when administered by the mouth in man, and is very rarely required where digitalis can be used.

Enforced Dogmatism in Medicine.

Sir Frederick Treves (British Medical Journal) shows how a great deal of the science of medicine of the past was founded upon pure nonsense, or rather upon the fables evolved to satisfy the demand of the public for dogmatism in all that related to ill health. In this extraordinary product the physician himself believed. The tale had come to be accepted as true; it was a matter of sober study; it formed the basis of the education of every medical man, while its ridiculous gibberish became the speech of the cultured physician. The true science of medicine, the science based upon assured facts, was proceeding side by side with this phantasm, but its influence was slight and its movement almost imperceptible. The course of medical progress had been diverted from the firm road into a shaking quagmire, where men stumbled to and fro, talking, so far as the ears of truth were concerned, in unknown tongues. The people insisted upon a complete, infallible system of medicine where there was neither doubt nor wavering, and they obtained in response to their impossible demand a fabric of fiction which is unique in history by reason of its magnitude, its detail, its audacity, and the completeness with which it satisfied the demand that called it into existence. This vast work of invention had no more concern with the living science of medicine than has the cocoon with the living butterfly. It was the people who were the leaders of early medicine. That they led it utterly astray does not alter the fact that they led. The physician had to adapt what little he knew or professed to know to the attitude of mind they displayed. The channels available for the expansion of medicine were channels directed by the people's needs and expectations, while the very details of the art had to conform to the popular understanding. The whole of this spurious science has long been swept away. Medicine is now an exact science founded upon well-tested facts; its speculations are directed by reasons and justified by experience. While its confines have been enormously extended, while its ramifications have become almost bewildering and its potentialities amazing to contemplate, its principles have been consolidated, simplified, and reduced to a few great propositions.

Iodine in the Treatment of Pulmonary Tuberculosis.—Boudreau, (*Journal de medecine de Bordeaux*) says that of the

ten years' experience, the continuous administration of the French tincture of iodine, one part by weight in twelve of alcohol, without potassium iodide, in large doses in the treatment of tuberculosis, especially pulmonary. The doses should be moderate at first, but later gradually pushed to the extreme limits of tolerance, from 100 to 350 drops of the tincture being ingested daily in milk, coffee, decoctions or infusions, or diluted wine. Only in pure water is the taste of the iodine unpleasant. Iodism is extremely infrequent, and the author considers tincture of iodine far less productive of untoward results than potassium iodide. From twenty-five to seventy drops of the tincture are taken in each glassful. The larger doses are used especially in the advanced cases of tuberculosis, and according to the author, have often brought about a surprising reversal from the lethal trend in these cases, with ultimate recovery. In the numerous incipient cases treated smaller amounts were frequently sufficient, but at times the larger amounts had to be used, and even then the condition was occasionally refractory to the treatment, a marked variation in this respect being noted in the various cases. In children six or seven years old forty to sixty drops a day, after a gradual ascent in doses, were perfectly borne. The benefit procured by the treatment, even in apparently hopeless cases, was shown in the unexpected recovery of many. Cures were obtained in grave cases even where the ordinary rest treatment was impracticable. The effect of the iodine in tuberculosis cases is ascribed by the author to its increasing the leucocytes, especially large mononuclears, and augmenting phagocytic activity. The tonic and defensive functions of the ductless glands are also increased by iodine; it is possible that it is useful as a direct germicide. Degenerated and poorly staining tubercle bacilli were observed in the sputum in treated cases. In threatening tuberculosis of the intestines, from swallowing sputum, iodine rather promptly inhibits the morbid process. He advises that the treatment be used in cases of tuberculous meningitis, renal tuberculosis, and tuberculous lymphadenitis.

Miscellaneous.

THE OLD-FASHIONED DOCTOR.

He's passed, the kind old doctor man,
That we knew in the long ago,
Whose tender ministrations ran
Through all life's troubled ebb and flow,
He smiled benignly when we made
Our premier entrance on life's stage,
And wept with loved ones when we paid
The debt that's due by youth and age;
And in the intervening space,
When we were plagued by divers ills,
He'd diagnose, with care, our case
And then prescribe us blue-mass pills.

He had a most imposing mien,
This dear old-fashioned doctor man,
The things that he had read and seen
Could scarce be learned in mortal span
The very spectacles he wore
Portentious wisdom seemed to shed;
We knew the ancients' healing lore
Was packed to bursting in his head.
He scorned all upstart theories,
Though he was death on fits and chills,
And all the modern therapies,
He'd gladly swap for blue-mass pills.

Ah! dear old-fashioned doctor man!
Perhaps your ways were not the best,
But ne'er a heart was kinder than
The one beneath your dog-skin vest.
You never vexed your mind at all
With serum, protoplasm, germ,
It ne'er occurred to you to call
For help to prop your skill infirm.
His head the modern doctor shakes
O'er means you used to cure our ills,
But he, too, buries his mistakes—
Like you, who gave us blue-mass pills.
—The Roanoke News.

Asepsis.

To write of asepsis in the year 1914 except in a textbook seems strangely out of place, and yet one only has to attend either public or private clinics to find out that asepsis, real asepsis is more talked about than practised. An observing visitor to clinics will be struck by the mighty array of caps, gowns, rubber gloves and face masks and at the same time wonder at the numerous slips in an aseptic technic. Many physicians, even in this day and time, thing a momentary dip in a solution of bichloride will destroy all pathogenic germs when, as a matter of fact, the hands should be held in such solution for a long time, and even then can not be considered clean without a previous thorough scrubbing, and soak-

ing in alcohol.

Again, we find surgeons who only make the veriest pretense of cleaning up when pus is already present. Of course they have not kept abreast of the times and the teachings of bacteriology which show conclusively that mixed infections are often much more severe than a pure strain infection. That rubber gloves are not an essential to success in surgery we all know, for some of our greatest surgeons seldom use them. That they are useful, indeed indispensable, for those handling pus and clean cases on the same day can not be gainsaid. As for the use of mouth pieces, face masks, etc., we must say that in our opinion a clean shaven, clean face, is better than any mask yet devised, and we say this, knowing full well that most of our greatest surgeons use them as a matter of routine. With a cover over his mouth a man can not speak without causing friction between the skin and the mask, which necessarily loosens epithelium and germs, while the force of gravity hurries both into the open wounds below. Should the mask cover all except the eyes, then every wink and blink loosens germs and dirty epithelium. If masks are going to be used, then the face should be greased with some mild antiseptic ointment. Finally, we all realize that our most perfect asepsis is really imperfect, we can but do our best and trust Nature for the rest, and she will do her part—the largest part—provided we get the patient in a good condition before any surgical work is undertaken. Therefore, if you want good results in your surgical work do not rush the patient from the train to the operating room except in the most urgent cases and do not scrub your hands for ten minutes and then adjust your glasses.—Editorial in The Nashville Journal of Medicine and Surgery.

Advanced Civic Service in Medicine.

Among our exchanges we have found a news item which announces the proposed plan in Chicago of organizing the various hospital clinics, under the auspices of the local Chicago Medical Society, with a view to providing a service, free of charge, to physicians visiting Chicago in search of knowledge.

This is far in advance of anything yet undertaken in this country. In Paris, for many years, the hospitals were free to reputable physicians under simple formalities. In Paris this privilege at one time opened up even laboratory opportunities under a nexpense which was only nominal. Many large cities in Europe have

offered like opportunities, and the exceptions have been chiefly in those places where the visiting physicians came in such crowds as to make it impossible to conduct instruction on a free basis.

Many of the hospitals in New York have been liberal in the privileges accorded physicians visiting New York for the purpose of witnessing surgery or of following special fields. The commercial instinct has obtained to a degree in all places, and Chicago has for many years offered postgraduate instruction at a price.

It is all the more gratifying to have the initiative come from this great city of the Middle West, demonstrating altruism of the finest in proposing that the function of the hospital in medical education should be put upon the same basis as its other charitable functions.

The greatest good to all may be attained under such motives, and the example should be contagious. To be really efficient, clinical instruction should be free and the purveyors should be inspired, as they were a century ago, when the master walked the wards of the hospital, with groups of students, in and out of college, listening and looking and profiting by the wisdom filling the discussion of the cases encountered.

The future of postgraduate study should contemplate just such opportunities, and the city and State should seriously consider the purpose of the hospital to this end.

Only a fragmentary note has come to us regarding the purpose of the Chicago Medical Society and the hospital clinics, but that note has let us dream of a broader conception of the modern interpretation of that Hippocratic injunction:

"I will keep this oath and this stipulation—to reckon him who taught me this art equally dear to me as my parents * * * ; to look upon his offspring in the same footing as my brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precepts, lecture and every other mode of instruction, I will impart a knowledge of the art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine."

When the physician comes into the new guild of humanitarian practise and such high calling that we may be in reality priests of sanitation and true servants of the sick, there may be a response in the public mind and public purse which will let such purposes become general—

and for such we devoutly wish and labor.
—Editorial in *The N. O. Medical and Surgical Journal*.

A New Device for Conserving the Vacuum and Life of X-Ray Tubes.

The X-ray tube without question receives its hardest usage when used in connection with fluoroscopy and deep therapy. In both instances the preservation of the vacuum of the tube is of vast importance because the penetration of rays is depended on the vacuum.

The placing on the market of a water circulating system, by the Victor Electric Company of Chicago, to be used in conjunction with any type of water cooled tube will doubtless be of interest to every user of X-ray apparatus in that it makes the tube ever so much more consistent in its action, and furthermore the actual life of the tube is increased many fold.

The water reservoir of the average water cooled tube has an average maximum capacity of approximately three ounces which of course heats up very quickly and as the water is heated the vacuum is lowered. Now when the Victor Automatic Water Cooling System is connected to the water cooled tube, the vacuum remains constant until the temperature of five gallons of water is raised. Compare the time elapsed in raising the temperature of three ounces of water, and five gallons of water and then you, as an X-ray man, can appreciate what a useful device the Victor Automatic Water Cooling System is.

Glyco-Thymoline Typhoid Fever.

To keep the alimentary tract as free as possible from fermentable matter, to inhibit as far as possible the activity of the putroactive bacteria which normally inhabit the intestinal canal, and to eliminate the toxin produced by the *Bacillus Typhosus* as rapidly as possible are desirable results to accomplish in treating Typhoid cases.

The power of Glyco-Thymoline to produce these results is amply proven by clinical reports from eminent physicians in all parts of the country.

The distressing conditions of fissured tongue and "cracked" lips is immediately relieved and the sordes of teeth and mouth quickly removed by the use of Glyco-Thymoline.

Intratracheal Use of Chloroform.—Mart, in *The London Medical Lancet*, modified the Junker apparatus by the

connection of the two tubes which pass into the chloroform container so that either pure air or chloroform vapor could be administered at will. Preliminary anesthesia is given by the ordinary inhalation method and when the patient is partially unconscious, the pharynx is cocaineized, and the tracheal catheter introduced. This catheter is specially devised so that there is an outlet on one side at a point outside of the mouth, and over the catheter a metal tube is slipped to prevent its compression by the teeth of the patient. The insufflation is carried out by hand pressure on the bulb three or four times while the lateral opening in the catheter is closed with the finger. The patient is then permitted to exhale through this opening. When anesthesia is sufficiently deep the by-pass is partially opened so as to permit the dilution of the chloroform vapor with some air, and this is adjusted to the point at which it is just possible to maintain the requisite grade of insensibility. This method has been employed in sixteen cases without ill effects, and seems to have the advantages of giving much more perfect control of the grade of anesthesia, the concentration of the vapor inhaled, and the rapid recovery of the patient through the insufflation of pure air at the end of the period of narcosis. There is also the added element of safety in the ability at will to stop all chloroform and wash out the lungs with pure air at a moment's notice.

Preventive Medicine and the Practitioner.

In various quarters and with varying purposes, it is being continuously held up as a point of distinction between the practice of medicine and all other callings, that whereas they are constantly and legitimately engaged in creating a demand for their products and their service, the medical man consistently furthers the progress of sanitation and preventive medicine to his own financial hurt. Sometimes this consideration is exploited as a tribute to the altruism and disinterestedness of the profession, sometimes as a note in the plaint of medical poverty, sometimes sheerly as an element to be reckoned with in the problem of medical and social economics.

With the bearing of such a proposition upon the various aspects of medical economy referred to, we are not particularly concerned, because we do not put any stock in the soundness of the proposition itself. It may, and undoubtedly does, serve as a sop to the vanity and compla-

gency of the self-satisfied practitioner who, as a rule, is making the most out of the present and doing the least for the future of medicine; it may, and does, furnish excellent material for the impassioned orator at commencement exercises and society banquets; but no thoughtful, sensible physician, in the sober contemplation of his sociologic values and relationships, ought to be deceived by such specious illusions.

It is true that the physician, by promoting intelligent sanitation and effective prevention, does bring about a decrease in the demand for his own palliative and curative skill. But medicine is by no means unique in this respect, nor is it quite so altruistic and paternal a state of affairs as our emotional writers and speakers would have us believe. Broadly speaking, the same paradoxical conditions obtain in every department of human activity which concerns itself in any way with the things pertaining to human progress. No sane man works constantly and deliberately to his own injury—that is one of the legal tests of insanity—and no man of any worth, on the other hand, but helps by his very work to relegate the product and necessity of his labor to the rear of the industrial procession, finally to drop out altogether.

As this characteristic is not inherent to medicine as a calling, so neither does it derive its stimulus from any distinctive quality of medical work. No stream ever rises higher than its source; few ever rise as high. Medicine would from many a foolish notion free herself if she would remind herself continually that she is but a specialized function of the great organization of human industry, and that her status at any given time represents the net status of human society in its relation to medical economy. Whatever of progress she has made has been made, in the main, not by reason of paternalism and disinterestedness on the part of medical men (except as these qualities were a part of the general altruism, common to all good men and true, manifested through medical science), but in response to the natural demand of an increasingly intelligent public for improved service.

If the medical profession is promoting sanitation and preventive medicine, it is not, principally, because of a heroic and self-immolating spirit inherent to the vocation and peculiar to its followers, but because the demand of an enlightened public is for hygiene and prevention of disease, just as it is for morality and the prevention of crime. It is not a matter of

choice, but of evolution and the survival of the fittest—the irresistible march of events, with which the modern physician must fall in, or drop out of the procession. The claim to special merit for so doing is simply making a virtue out of a necessity. The only element of virtue lies in recognizing the signs of the times, and entering whole-heartedly and manfully into the spirit of the thing—an attitude which it must be admitted medical men have, on the whole, splendidly carried out.

And finally, it is not at all apparent to the thoughtful student of affairs that the promotion of preventive medicine implies the decadence of the medical practitioner. It only indicates the diversion of his usefulness into other channels. As sanitary and hygienic conditions grow, the physician's scope of influence and activity becomes proportionately broader and new and remunerative fields of service open out to him. One might as well argue that the decrease of crime and diminution of court trials would do away with the necessity for and the usefulness of lawyers, whereas everyone knows that infinitely more work, and more profitable work in every way, is done by lawyers out of court than in it. The most successful and high-class lawyers are those who keep people out of the law courts and out of trouble.

From every point of view, therefore, as we see it, the idea that "the medical profession," as one of our contemporaries says, "is radically different from all other callings and professions in that it strives to prevent all demand for its services," or that in so doing it works to its own deliberate injury is specious and gratuitous. It has neither warrant in fact nor ground in reason. That which is true in it is not peculiar to medicine; that which purports to be peculiar to medicine is not true. It can not be properly advanced as a special feature of altruism in the profession; certainly, if true, it would not be very flattering to their intelligence; nor need it furnish a moment's disquiet to those who have been disposed to view it in the light of a menace to the future of their chosen calling.—Editorial in Medical Brief.

A New Method of Testing the Strength of the Heart.

At a recent meeting of the Berlin Society for Internal Medicine, Professor Katzenstein read a paper on a new method of testing the strength of the heart. The characteristic feature of his procedure is that

he ascertains the number of the beats and the blood pressure before and after a compression of both crural arteries. When the strength of the heart is sufficient the number of the beats decreases, and the blood pressure increases after the compression. In slight insufficiency both remain unaltered, and in severe insufficiency the number of beats increases whilst the blood pressure is sinking. This method has proved valuable in many cases. It may also be used for ascertaining any damage done to the heart by narcotic compounds. When the test gives an unfavorable result, general anaesthesia is contra-indicated for such patients, and only local anaesthesia ought to be employed. In nervous patients, however, the method is not reliable.—London Lancet.

A Simple Method of Treating Warts.

The method in question consists in covering the wart and the surrounding skin, to the width of 1 centimetre, with ordinary caoutchouc plaster, and leaving it so covered for weeks—even, if necessary, for two or three months. Whenever the plaster becomes loose it must be removed and replaced by a new piece. As a rule, the plaster is to be changed once in three or four days. Any adherent residue of the caoutchouc is to be removed with ether of petrol, care being taken that the wart or the surrounding skin shall not be rubbed energetically, because irritation of the skin is not conducive to the disappearing of the wart. The author offers no explanation for the action of this simple method, and how it produces such excellent results from the cosmetic point of view, unless it is that the caoutchouc contains some substance which softens the wart and causes atrophy, but it is certainly efficient.—Szontagh, in *The London Lancet*.

Chronic General Periodontitis.

Colyer (London Practitioner) makes the statement that clinically this disease, known to us as pyorrhoea alveolaris, starts either between the posterior teeth or around the anterior teeth. In the former situation, the stagnation is principally produced by lodgment of food, while in the latter, it is the direct result of mouth breathing. The doctor says that a marginal gingivitis around the anterior teeth, more especially the lower incisors, is diagnostic of mouth breathing, and that this gingivitis, unless cured by making the patient a nose breather, must lead to periodontal disease. The most virulent types of periodontal disease are usually to be found in mouth breathers. Under normal conditions, microorganisms are al-

ways present in the mouth, but these are cared for by the defences of the body. In septic conditions of the mouth the number of organisms is increased and the defences of the body at times are unable to cope with the attack, so that pathological processes may be started in the body. Infection may also come through the bone. With regard to treatment the following points need to be taken into consideration: 1. The important part played by mouth breathing, which renders local and other remedies of little avail. 2. The more thoroughly the function of mastication is carried out, the greater will be the resistance of the tissues. 3. The recuperative powers of the patient are indicated by the condition of the alveolar process. The presence of sclerosis of bone may be taken as a sign of resistance. 4. The condition of the teeth may be taken as an index of the amount of rarefying osteitis. Cases favorable for treatment are those in which the pockets around the teeth are shallow, in which the arch is well developed, the function of mastication efficiently performed. Treatment resolves itself into a question of drainage. The more the thoroughly the pockets can be cleansed, the greater the chance of staying the progress of the disease. The measures he adopts are thorough scaling, massage of the gum, regular irrigation by the patient of the spaces around the teeth, for which hydrogen peroxide is useful, but the main thing is to keep the spaces clear and clean, and the occasional application of tincture of iodine to the pockets. Thorough cleanliness of the pockets seems to be the keynote. Other cases that are not favorable for treatment are grouped under two headings, those unassociated with apparent symptoms, and those in which a causal relationship to other diseases has been established. In the former class, the discharge from the tissues may be kept in check by efficient irrigation, but the patient has a potential source of infection which may become active at any time, and the greater the destruction of the alveolar process the less is the chance of making comfortable and efficient dentures, so it is questionable whether it is not best to remove the teeth. In the second class of cases, the removal of all the affected teeth is the right line of treatment and the only safe course. The doctor mentions some cases of arthritis and of suspected tuberculosis that were dependent on this disease.

Hypothyroidism in Children.

Dick, says that a considerable proportion of children who are subjected to operation for enlarged tonsils and adenoids show symptoms of rickets. These children are

frequently mentally dull, with dry rough skin, nasal or bronchial catarrh, sluggish circulation, coarse hair, defective speech and soft bones. The effect on the teeth is usually shown in the incisors which are jagged with defect in the enamel and an exposed edge of dentine. These are symptoms usually associated with deficiency of thyroid secretion. In the disturbance to the mutual relations of the thyroid, thymus and parathyroid glands we have the probable explanation of the cause of rickets. The older theory that a breast-fed child could not be rickety, the author holds, is unfounded, for in his experiences in school work he has frequently encountered just such cases. The doctor thinks that the mothers of these childrens have lived in want and under unhygienic conditions and that during lactation they suffered from deficient thyroid secretion. The effects of this condition reacts detrimentally upon the children. The poor quality of the mother's milk is not alone sufficient to explain the occurrence of rickets in the children, though it undoubtedly is a powerful contributing factor. The lack of proper food and the unhygienic surroundings in later years is another factor. The fact that the children usually become more robust after reaching the age of seven years is probably due to their being permitted greater liberty in running about out-of-doors.—London Lancet.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme Court of Victoria at Melbourne, and others reported before in the medical literature, show that every physician should see that his patient gets exactly what he prescribed, No "just as good" allowed.

Vaso-Motor Derangements.

The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vaso-motor or circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation.

The Reaction of Morelli in Tuberculous Pleural Exudates.

Zannini says that this reaction, which is similar to the Runeberg nitric acid test, is based upon the fact that mercury combines with different types of albumin and gives rise to corresponding metallic albuminates. The technique of the reaction is a simple one. A cylindrical glass vessel is filled with a saturated aqueous solution of corrosive sublimate. Into this there are introduced slowly three or four drops of the liquid to be examined. If this is an exudate there forms on the surface of the solution a yellowish annular coagulum of albuminate of mercury which adheres to the side of the glass. If the liquid to be examined is a transudate the coagulum falls to the bottom of the vessel in the form of fine flocculi. This is the negative reaction which occurs constantly in the case of tuberculous pleural exudates.—Rivista Ospedaliera.

(*Book Notices Continued from page 392*)

Progressive Medicine, a Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia. Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. Volume IV. December, 1914. Lea & Febiger, Philadelphia and New York, 1914. Subscription price, \$6.00 per annum.

This number of *Progressive Medicine* contains five articles entitled as follows:

Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas, and Peritoncum by Edward H. Goodman, M. D.; Disease of the Kidneys by John Rose Bradford, M. D.; Genito-Urinary Diseases by Charles W. Bonney, M. D.; Surgery of the Extremities, Shock, Anesthesia, Infections, Fractures and Dislocations, and Tumors by Joseph C. Bloodgood, M. D.; Practical Therapeutic Referendum by H. R. M. Landis, M. D.

The article by Dr. Bloodgood is especially good and the illustrations are numerous as well as excellent.

The Cancer Problem, By William Seaman Bainbridge, A. M., Sc. D., M. D., Professor of Surgery, New York Polyclinic Medical School and Hospital; Surgeon, and Secretary of Committee of Scientific Research, New York Skin and Cancer Hospital; Consulting Surgeon, Manhattan State Hospital, Ward's Island; Honorary President, First International Congress for the Study of Tumors and Cancers, Heidelberg, 1906. New York: The MacMillan Company, 66 Fifth Avenue, 1914. Price \$1.00 net.

This book by Dr. Bainbridge fills a place in medical literature which has long been vacant. The condition of literature on cancer has been quite chaotic and to acquire any dependable information concerning any phase of the subject necessitated almost endless tedious search. To meet the definite need for a book of ready reference, of convenient size giving a summary of knowledge concerning the cancer problem Dr. Bainbridge wrote the present volume.

For a number of years Dr. Bainbridge has been surgeon to the New York Skin and Cancer Hospital where he has annually examined and treated patients

in all stages of the disease. He has been in close touch for years with all the cancer centres and with many of the most distinguished investigators of the world and in the many leading hospitals with which he is connected, and in his private practice, he has added thousands of cases of cancer to his list of observations. Indeed there have been few men who have had any better opportunities for studying cancer than he has. This experience of course enabled him to exercise great discrimination in selecting the matter for this book.

The Cancer Problem will prove useful alike to the laboratory worker, to the general practitioner, to the surgeon, to the students of public hygiene and health—in fact, to all who are interested in matters of general and individual health-maintenance. It is a practical summary of what is known today concerning cancer.

There are thirty-eight plates and fourteen illustrations in the text all of which are excellent. The book contains 534 pages.

A Medical Dictionary For Nurses. Giving the Definition, Pronunciation, and Derivation of Terms Used in Medicine, together with Supplementary Tables in Weights, Measures, Chemical Symbols, etc., Arranged with Special Reference to Use by Nurses. By Amy E. Pope, Graduate of the School of Nursing of the Presbyterian Hospital, in the City of New York; Special Diploma in Education from Teachers College, Columbia University, New York; Formerly Instructor in the School of Nursing, Presbyterian Hospital; Instructor in School of Nursing, St. Luke's Hospital, San Francisco, Cal. Author of "Essentials of Dietetics," "Quiz Book of Nursing," "Anatomy and Physiology for Nurses," with Anna Maxwell "Practical Nursing." G. P. Putnam's Sons: New York and London, The Knickerbocker Press, 1914. Price \$1.00.

This little volume of 288 pages provides a medical dictionary containing a detailed definition of words and terms of special importance to nurses. To do this without making the book larger than seemed advisable, it was necessary to omit some words usually included in medical dictionaries, but those omitted are ones which nurses are not likely to look for or which are similar to those contained in the book.

The author has included in the book

a list of abbreviations frequently used in writing prescriptions, the chemical symbols that are frequently used to represent common compounds, a table of the elements, a table of some of the more common poisons, a comparison of centigrade and fahrenheit thermometric scales, and many other tables and comparisons.

The book is one that I heartily recommend for anyone connected with nursing.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume 111. Number V. Octavo of 190 pages, 61 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Published Bi-Monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

The table of contents for the October issue is as follows:

Murphy's Clinical Talks on Surgical and General Diagnosis; A Diagnostic Talk on the Symptoms and Signs of Renal and Ureteral Stone, Illustrated by a Case. The Differential Diagnosis of the Causes of Hematuria. Routes of Metastasis and Clinical Course of Malignant Tumors of Kidney and Testis. Intrathoracic Sarcoma Starting from the Vertebral Column. Differential Diagnosis. A Talk on the Diagnosis of Meningitis and the Differentiation of its Varieties by Dr. Charles L. Mix, Illustrated by Two Cases. Perinephritic Abscess, Probably Embolic in Origin.—Opening and Drainage.

Traumatic Epilepsy.—Adhesions Between Scalp and Dura Through an Old Trephine Opening.—Adhesions Between Dura and Cerebral Cortex.—Osteoplastic Flap Operation and Freeing of Adhesions. Subsequent Coma and Death.

Epithelioma of Glans Penis.—Amputation.

Carcinoma of the Corona Penis with Metastasis in the Inguinal Glands.

Fecal Fistula.

Old Inversion Fracture of the Ankle Treated as a Pott's Fracture by an Adduction Dressing.—Consequent Adduction Deformity. Operative Correction and Nailing of the Fragments.

Old Inversion Fracture of the Left Ankle Treated as a Pott's Fracture. Consequent Bad Deformity.—Open Reduction and Nailing.

Old Pott's Fracture.—Internal Malleolus Broken Off and Rotated, Producing Non-Union.—Open Reduction and Nailing.

Removal of Nail From the Right Tibia and Os Caisis.

A Recent Report from an Old Case of Knee Arthroplasty.

Arthroplasty of the Knee for Bony Ankylosis.

Arthroplasty of the Elbow for Complete Bony Ankylosis Between the Humerus and Ulna in a Position of Complete Extension.

Hypertrophy of the Middle Lobe of the Prostate.—Urinary Retention.—Prostatectomy.

Imperforate Anus.

The Use of Radium and the X-rays in the Treatment of Cancer.

Prohibition in France and Russia.

Prohibition In France and Russia

In two European countries, France and Russia, permanent prohibition of the transportation and sale of certain of the stronger alcoholic drinks may be one of the results of the war. France, which is the largest consumer of liqueurs and which has suffered greatly from the evils of alcoholism, has decided to prohibit hereafter the transportation or sale of absinthe and all similar alcoholic drinks. The government order was issued on November 8. The total closing down of the liquor business in Russia, with enormous benefits already appreciable to the population, was one of the unexpected results of the war. An imperial ukase closed the wineshops throughout the empire during the first week of mobilization. It had been a tradition in Russia that the assembling of the army was accompanied by disorders and riots, largely, if not wholly, due to alcoholism. The sale of liquor in Russia, it will be remembered, is a state monopoly, which has for more than a decade yielded the treasury annually hundreds of millions of dollars. As soon as the war broke out the government issued a second order absolutely forbidding the sale, transportation, or consumption of any liquors during the period of the war.

Immediately,—we learn from the Russian press,—drunkenness, with its accompanying evils of holliganism and crime, was reduced to a striking degree. Even the reactionary Minister of the Interior, Maklakov, who, not long ago, gave it as his opinion that vodka was a necessity to the masses, is now admitting that it is a source of crime and disorder. Seeing the beneficial effects of prohibition many individuals, societies and even some whole communities began to petition the authorities not to reopen the wineshops. The third government measure, which took effect on November 16, extends the prohibition to every form of alcoholic drink in all portions of the em-



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pire under martial law until the end of the war. The Russian press is unanimous in praising the measure as likely to lead to "the moral and material regeneration of the country, no matter what may be the outcome of the war."—From "The Progress of the World," in the American Review of Reviews for December.

Reprints Received.

Neurasthenia and Psychasthenia, a Difference, by S. T. Rucker, M. D., Memphis, Tenn. Reprinted from The Journal of the Arkansas Medical Society.

Observations on Anxiety-Neurosis, by Dr. S. T. Rucker, Memphis, Tenn. Reprinted from The Southern Medical Journal.

The Diagnostic and Clinical Significance of Blood Pressure, by S. T. Rucker, M. D., Memphis, Tenn. Reprinted from The Memphis Medical Monthly.

End Results of Surgical Operations on Nervous Women, by S. T. Rucker, M. D., Memphis, Tenn. Reprinted from The New York Medical Journal.

Some Suggestions for a Change in the State Law Concerning Expert Testimony, by S. T. Rucker, M. D., Memphis, Tenn. Reprinted from The Journal of the Tennessee State Medical Association.

The Early Recognition and Surgical Relief of Hypertrophy of the Prostate, by R. C. Bryan, M. D., Richmond, Va. Reprinted from The Virginia Medical Semi-Monthly.

Cancer of the Breast in a Boy Fifteen Years Old, by Robert C. Bryan, M. D., Richmond, Va. Reprinted from Surgery, Gynecology and Obstetrics.

Prostatic Hypertrophy and Its Relief by Surgical Measures, by R. C. Bryan, M. D., Richmond, Va.

Aneurism of the Sciatic Artery, by Robert C. Bryan, M. D., Richmond, Va. Reprinted from Annals of Surgery.

Technic of the Intra-Abdominal Administration of Oxygen, by William Seaman Bainbridge, M. D., New York. Reprinted from The American Journal of Surgery.

Chronic Intestinal Stasis Surgically Considered, by William Seaman Bainbridge, M. D., New York. Reprinted from The New York Medical Journal.

Chronic Intestinal Stasis. A.—Types of Cases. B.—Preventive and Medical Treatment Outlined, by William Seaman Bainbridge, M. D., New York City. Reprinted from The Woman's Medical Journal.

The Significance of Intra-Abdominal "Bands," "Folds" and "Veils," by William Seaman Bainbridge, M. D., New York. Reprinted from The Boston Medical and Surgical Journal.

Personal Experiences With Radium, by Dr. W. H. B. Aikins, Toronto. Reprinted from The Canadian Practitioner and Review.

The Histological and Clinical Changes Induced by Radium in Carcinoma and Sarcoma, by W. H. B. Aikins and K. M. B. Simon, M. B., Toronto. Reprinted from Dominion Medical Monthly.

An Outbreak of Foot and Mouth Disease.

Foot and Mouth Disease, also known as Aphthous Fever, Epizootic Catarrh. Eczema Contagiosa, is an Acute Communicable Disease usually confined to the ruminants and characterized by a vesicular eruption on the mucous membrane of the mouth and on the skin between the toes and above the hoofs. The vesicles rupture, erode, or ulcerate. Salivation, tenderness of the infected parts, loss of appetite, emaciation, and rapid cessation of lactation among dairy cattle ensues.

The disease is extremely contagious, so much so that if one animal in a herd is infected, the entire herd is almost certain to become infected. While the mortality is not high, the effects of the disease are such that animals recovering are practically useless for long periods. Animals infected are said to become valueless for breeding purposes. No definite immunity is rendered by an attack. The period of incubation is somewhat variably reported by various observers to as high as forty days.

The disease in man is a direct counterpart of that in cattle. Infection is usually transmitted by means of milk or other dairy products. It is rarely transmitted from the salivary secretions or other infected material. It is doubtful whether the disease can be transmitted to man by

sub-cutaneous or cutaneous inoculation. Children are the most frequently infected. Unless the individual be physically depleted, death or serious consequences never occur. In man, foot and mouth disease has been on one occasion demonstrated as a contamination of vaccine virus. From this, however, no serious results are likely to occur, as will be noted by German statistics. In thirteen years, 32,166,619 were vaccinated. Of these, one hundred and fifteen died within a few weeks or months after the operation—presumably of injuries which might be associated with the operation.

Foot and Mouth Disease has appeared in the United States on five occasions; in 1870, 1880, 1884, 1902-3, and 1908—each outbreak having been followed by complete suppression by application of preventive means, namely; isolation, disinfection, inspection of all forms in the infected areas, and the destruction of the sick animals. Little is known of the virus. It is ultra-microscopic and filterable. The question of immunity seems to be an open one, there being a disagreement in the views held by the German authorities and those of the U. S. Department of Agriculture.

It is believed that the present outbreak was brought into this country in August in hides imported from the Argentine, or by those of the Water Buffalo imported from the Philippines, these hides being used by belt manufacturing companies in Niles, Mich. The first cases reported to the Government were from Southern Michigan and Northern Indiana. The infected dairies were quarantined, but it was discovered that hogs and feeders and stockers had been shipped to the Chicago Stock Yards and there scattered throughout the country. The work of following up and securing control of all of these sources of infection is a stupendous undertaking, but it is being pursued with the utmost zeal.

Quarantine is extremely rigid, prohibiting interstate shipments, skins and hofs of live stock, as well as hay, straw, manure, et cetera. A few days after the reporting of the disease in Chicago, it made its appearance in the valuable live stock on exhibition at the National Dairy Show. Owners of this live stock from all sections of the country are extremely bitter in their criticism of the manner of quarantine maintained by the authorities in Chicago. For instance, it was known herd during the middle of the concluding that the disease was present in the exhibit week of the Show. Thousands of people

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were permitted to pass through the exhibit, and immediately after the closing of the Show a rigid quarantine was applied. This mal-administration will undoubtedly be aired in the courts. Thirteen States are now quarantined.—Editorial in The Cleveland Medical Journal.

A Simple Method of Treating Warts.

The method in question consists in covering the wart and the surrounding skin, to the width of 1 centimetre, with ordinary caoutchouc plaster, and leaving it so covered for weeks—even, if necessary, for two or three months. Whenever the plaster becomes loose it must be removed and replaced by a new piece. As a rule, the plaster is to be changed once in three or four days. Any adherent residue of the caoutchouc is to be removed with ether of petrol, care being taken that the wart or the surrounding skin shall not be rubbed energetically, because irritation of the skin is not conducive to the disappearing of the wart. The author offers no explanation for the action of this simple method, and how it produces such excellent results from the cosmetic point of view, unless it is that the caoutchouc contains some substance which softens the wart and causes atrophy, but it is certainly efficient.—Szontagh, in The London Lancet.

The Destruction of Louvain and Its University.

While we must all shudder as we read of the horrors of the European war and the indescribable cruelties which have been inflicted upon individuals—especially upon non-combatant men, women and even little children—the awful devastation of brave little Belgium must stand out as one of the most unforgivable and unnecessary tragedies of all history. While it is hard to single out one horror of this war as more horrid than another, the wanton destruction by the Germans of the University and the Library of Louvain may be instanced as an absolutely irreparable loss to the whole world—and one which students of history and especially of the history of medicine must for all time deplore. The University of Louvain which dates back to the early part of the 15th century, has always been one of the largest and most important seats of learning in Europe, and its library one of the richest repositories of early historical manuscripts and books. To students of medicine, and especially to anatomists, it had a peculiar interest because it was at Louvain that Andreas Vesalius first studied and later became one of its most eminent professors, and it was through him, that Louvain became the most important anatomical centre in the world.

Vesalius was born at Brussels in 1514 and this very year it had been arranged that an official celebration of the four hundredth anniversary of his birth should be held in Brussels in December next. As a part of the commemoration there had been arranged the publication of a *Liber Memorialis*, which has for some months been in course of preparation and part of which is believed to have been already in press at the time of the destruction of the city of Louvain—whether it can ever be completed seems in the light of recent events most uncertain.

The first part of this book, extending to about two hundred pages small quarto, was to be devoted to the iconography of Vesalius. His features have been reproduced by a great number of painters, sculptors, and medallionists—several of them illustrious artists. As in the case of other celebrities—notably Shakespeare and Queen Mary of Scots—the portraits differ so greatly that they can hardly be accepted as representing the same person. In the Basel portrait, for instance, the great anatomist is represented with fair hair; in the one in Munich with black hair; in that at Glasgow with dark brown locks, while in the Padua portrait the hair is red. There is one portrait of Vesalius

which is generally regarded as authentic. It forms the frontispiece of his great work *De Humani Corporis Fabrica*, published in 1543. In the *Liber Memorialis* all the portraits and likenesses that could be obtained from Louvain, Brussels, Basel, Padua, Oxford, Munich, Amsterdam, Florence, Glasgow, London, Paris, Vienna, Marseilles and other universities and museums, are reproduced in phototype. Each portrait is accompanied by a note giving all information about it and critically studying its origin and history. The author of this portion of the *Liber Memorialis* is Mr. M. H. Spielman of London, the well-known art critic who has made a special study of the portraits of Shakespeare. The second part of the book was to have been devoted to the biography of Vesalius; M. Paul Faider of Mons, has translated the introduction written by Vesalius himself for his book; Professor Desmarez, archivist of the city of Brussels, has made researches on the authentic documents possessed by the library, in which he has found interesting information regarding the youth of Vesalius and the part played by him at the Court of Charles V, to whom he was physician-in-chief, and whom he accompanied on some of his campaigns. Professors Paul Heger, H. Leboucq, and A. Brachet have dealt with the scientific work of Vesalius. The *Liber Memorialis* will thus, if it ever appears, constitute a magnificent homage to the memory and work of the father of modern anatomy. Let us hope that the material for this interesting work may have escaped destruction and that later, when Europe has returned to her senses—if she ever does—it may be published. In the October issue of the *Inter State Medical Journal* there is reprinted a considerable portion of an interesting sketch of the life of Vesalius which originally appeared in *Fraser's Magazine* in November, 1853. We commend its perusal to those interested in the history of medicine and particularly to those who would learn something of the details of the life and times of this most remarkable pioneer of anatomical science.—Editorial in *The St. Paul Medical Journal*.

Medical Journals and the Federal Act Against Mailing Obscene Matter.

The editor of the *Southern California Practitioner* has recently been indicted by a Federal grand jury on the charge of sending through the mail "obscene, lewd, and lascivious" matter published in his journal as an original article. The article

contained matter relating to the sexual act, which, being published in a medical journal was naturally intended for physicians and not for the laity. Without intending to pass upon the guilt of the accused in the present case or in any way usurp the functions of the court, we are constrained to reflect upon the application of the statute under which medical journals are constantly so perilously near to offending, that is, if the editor of our contemporary is guilty as charged.

There is no question that the mailing of matter characterized by the statute as "obscene, lewd, or lascivious" is unlawful and subject to severe punishment, but to determine when matter comes within the scope of that characterization is often difficult. In applying the test, the words are given their ordinary recognized meaning rather than a technical or legal meaning. Applying this test, anything which is offensive to chastity and decency and has a tendency to produce that form of immorality which has relation to sexual impurity in those open to such immoral influence into whose hands it may fall, comes within the prohibition of the statute.

Unquestionably an article dealing with the sexual functions circulated among the general public would create in the minds of many of its readers sensations of disgust or lewdness, depending upon the conditions, circumstances, and temperament of the particular reader, but the suggestion that a physician would be similarly shocked or moved by such a production would doubtless come to most members of the profession as a humorous surprise. It would seem, therefore, that the court, not only from the necessities of the case, but as well from the application of the ordinary import of the words, would apply to matters intended for a select and restricted circulation such as a medical journal, a distinctly different standard from that applied to articles intended to be placed in the hands of the general public. An examination of the decisions discloses such a disposition, although it does not appear that the courts have passed upon the application of the statute to the facts existing in this case.

In the case of U. S. Chesman, 19 Federal Reports, 497, Judge McCrary said: "It may be, and probably is true that much of the offensive matter is taken from books upon medicine and surgery, which would be proper enough for the general use of members and students of the profession. There are many things contained in the standard works upon



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these subjects which, if printed in pamphlet form and spread broadcast among the community, being sent through the mails to persons of all classes, including boys and girls, would be highly indecent and obscene." The judge then proceeds: "I am not prepared to say, and it is not necessary now to decide whether these medical books could be sent through the mails without a violation of the statute." And accordingly in the case of U. S. versus Smith, 45 Federal Reports 476, Judge Jenkins says: "Whether act or language is obscene depends upon circumstances. The public exposure of the person is most obscene, yet the necessary exhibition of the person to a physician is not only innocent, but is a proper act, dictated by positive duty. Instruction touching the organs of the body, under proper circumstances, is not reprehensible; but such instructions to a mixed assemblage of the youth of both sexes might be most demoralizing."

While in the case of U. S. versus Clarke, 38 Federal Reports 500, Judge Thayer, after considering the distinction suggested by Judge McCrary between matter contained in standard medical works, and in pamphlets for general cir-

culatation, declared it to be his understanding that the character of a publication, whether obscene or otherwise, is to be determined by no other criteria than its subject matter, the method of treatment of the subject involved, the illustrations it contains, and its tendency, in all respects, corrupt those whose minds are open to immoral influences, but that if the defendant were in any case justified in sending what would ordinarily be deemed an indecent publication through the mail, by reason of the calling, profession, or peculiar need of the person to whom it was sent, that was a matter of defense to be brought forward by the defendant.

None of these views or expressions may be regarded as having and binding force or effect upon a court passing upon the question directly involved, as they are mere dicta, expressions obiter, setting forth views entertained upon a subject only collateral to the question the being decided. These views are in large measure helpful, however, as from them one may, to a considerable extent, forecast the character of instructions that the judge will give to the jury, which, after all, is the body that must determine whether or not, under all of the circumstances submitted to their consideration, the defendant is guilty of having mailed "obscene, lewd, or lascivious" matter.—New York Medical Journal.

Operative Treatment of Traumatic Stricture.

The literature of the European continent during the last few years has contained many references to the operative treatment of stricture which seeks to replace diseased by healthy tissue either by grafts (Saphenous Vein of Tanton,) or by resection of the strictured portion of the canal. The latter method has been applied especially to traumatic strictures. The healthy portions of the urethra adjacent to the stricture at either end are fully mobilized to permit of their easy approximation without undue tension. The scar tissue is then excised and the free margins accurately sutured with fine catgut. As much as 5 cms. of the urethra have been thus resected (Cochez, *Journal d'Urologie*, IV, 1.) Some of the operators guard the healing of the urethral wound by diverting the stream of urine either through a suprapubic cystostomy or through a perineal. Others are content to merely tie in a catheter. The results as a whole are generally reported as quite satisfactory.

My own opinion is that a permanent

catheter tied in may do more harm than good, since it is essential that the urethral wound heal by first intention. There is always without fail inflammation about a catheter left in the urethra and the presence of a foreign body only serves to aggravate it. While this is a matter of minor consequence when the catheter is left in order to keep a diseased bladder drained as in prostatic enlargement, yet it is all-important, when the primary healing of an urethral wound is sought. Such a wound breaking down not only defeats the aim of the operation, but may even serve to make the condition worse than it was before.—Pacific Medical Journal.

Cerebrospinal Fluid.

Since the introduction of lumbar puncture by Quincke in 1891 a great amount of information has been accumulated concerning the composition of the cerebrospinal fluid under both normal and pathological conditions. The investigation of this fluid has become a matter of importance in the diagnosis of many diseases, and the method of lumbar puncture is used for the administration of a number of therapeutic agents. In all this time the knowledge of the physiology of this secretion has advanced very slowly. Theories have been many but few of them have found confirmatory facts to support them. In this accumulation of fact and fancy the work which has recently appeared (*Journal of Medical Research*, September, 1914) by Cushing, Weed and Wegefardth, stands out as the most important contribution to the physiology and pathology of the subject since Quincke's revolutionary announcement. The source of the cerebrospinal fluid has for a comparatively long time been believed to exist chiefly in the choroid plexus, and since the work of His, some investigators have considered the so-called perivascular lymph spaces as an accessory source. No direct proof, however, has been offered to support these theories. These workers introduced a silk catheter through a slit in the exposed occipito-atlantal ligament, through the aqueduct of Sylvius into the third ventricle. From the opening of this catheter fluid dropped which was exactly similar to cerebrospinal fluid, and continued to drop for some time. This experiment thus affords direct evidence that fluid is secreted by the choroid plexus, since the lining ependyma of the ventricle fails to yield and histological evidence of secretory activity. It also has afforded an

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excellent opportunity to study the effect of drugs upon the secretion of cerebro-spinal fluid and it was found that the secretion was stimulated by ether, pilocarpine, choroid extract, and the secretion of the posterior lobe of the hypophysis. By means of their injection experiments they were able to demonstrate a direct connection between the subarachnoid space and the perivascular spaces. It is noteworthy that the injection of these spaces was satisfactory only when an anemia of the brain was created during the course of the injection. Thus there is demonstrated a dual source for the fluid, the chief one through the choroid plexus and the accessory one from the perivascular spaces. They believe it is over the latter path that the brain cells rid themselves of waste products. In addition they draw the analogy to the dual source, from the ciliary body and from the retina, of the aqueous humor of the eye.

In their studies they tried out many methods of injection and finally determined the superiority of the injection of a solution of potassium ferrocyanide and iron and ammonium citrate in such

strengths that the solution was practically isotonic. This was injected very slowly at a pressure only slightly above that of the spinal fluid normally. At the end of the injection the animal was killed and the head fixed in formalin containing hydrochloric acid. This treatment resulted in a precipitate of Prussian blue in all places reached by the injected solution. The result obtained by this method far exceeded those hitherto though possible. The authors were able to show conclusively that the fluid escaped from the ventricles into the subarachnoid space and thence found its way into the sinuses of the dura through special processes of the arachnoid, the arachnoid villi, which project directly into the sinuses. These villi are delicate web-like structures which continue the outer arachnoid membrane into the dural wall. They have not hitherto been described at all adequately, especially in this connection, although anatomists have always been familiar with the pathological form of the villus, the Pacchionian granulations. There exists also an accessory pathway of absorption through the perineural spaces around the cranial and spinal nerves from which the

fluid is taken up by the lymphatics. Here, again, these authors have demonstrated a remarkable analogy between the cerebrospinal fluid and the aqueous humor of the eye. The principal pathway in the eye is through the spaces of Fontana and the pectinate ligament and into the canal of Schlemm by means of the pectinate villi which are wholly similar to the arachnoid villi. The accessory pathway here is apparently by way of the perineural space about the optic nerve, which furnishes a direct connection between the subarachnoid space and the interior of the eye. They also point out the close chemical similarity of the two fluids.

These studies are exceedingly enlightening and open wide and attractive fields for research and speculation. It will take years to realize to the full their possibilities of practical application. It was the good fortune of these workers, however, to obtain a naturally hydrocephalic kitten and by pushing a hollow needle through the superior longitudinal sinus into the subarachnoid space they were able to create a direct connection between the two. This remained open for at least a week and the operation was repeated several times. Each time the symptoms were relieved for about a week and there were apparently no unpleasant sequelae. In this connection they were able also to demonstrate that the pressure of the cerebrospinal fluid was greater than that of the blood in the dural sinuses. Further experimentation along the lines suggested by this work will no doubt yield information of tremendous therapeutic value. The authors state that they are investigating the effect of drugs on the rate of secretion of the cerebrospinal fluid and there are many other important questions which are probably susceptible of solution by these methods.—Editorial in The Medical Record.

A Self Supporting Clinic.

We find in the Archives of Ophthalmology for November an interesting account of an experimental clinic which proved almost self supporting during its first year, and at the same time provided for certain needs of self respecting people at rates within their means without subjecting them to the opprobrium of receiving charity. This sounds so much like a fairy tale that we will present the facts as stated.

On April 29, 1913, the Boston Dispensary opened an evening clinic for eye diseases to provide for persons who could not afford the regular fee of an oculist,

or the loss of working time consequent upon attendance at the day clinic. It was believed that this class of wage earners would prefer to come in the evening and to pay a small fee, one dollar for the first, and fifty cents for each subsequent visit. The medical men were paid, glasses were furnished at prices slightly above wholesale cost, and medicines were also provided at a small profit. The clinic was open at first only one night, later two nights a week. A surgeon and a social service worker were in attendance from the start, an assistant surgeon two thirds of the time, and a clerk when necessary. During the year, 581 patients were treated, 209 men, 361 women, and eleven children. All were excluded who, after questioning, seemed to be able to pay an oculist's fee, but no one was refused treatment because of inability to pay the small amount asked for, so thirty-two patients received free treatment. The total income for the year was \$1,355.16, the total expenses \$1,380.05, so that during the first year the clinic came within \$24.89 of paying expenses and may reasonably be expected to be self supporting in the future.

There is much to be commended about the plan. First and foremost is the elimination of charity, in its offensive sense. Charity is something that self respecting people do not like to receive, and yet the great bulk of our population are obliged to take it if they are to have the best medical service. It has often been remarked that the very rich and the very poor are equally well provided with the best medical and surgical service, while the great middle class must either put up with inferior service, or present themselves as supplicants for medical charity. No matter how small the fee, if it is all the patient can afford and the doctor receives it, this opprobrium is removed.

Seventy-eight per cent. of the patients treated had refractive troubles, the remainder diseases of the eye of one form or another. The average "refractive" patient made two visits and paid in fees \$1.50; patients with diseases made more visits and the cost was greater, yet the total average fee was only two dollars. Investigation has shown that this class of people largely patronize opticians or optometrists, or buy glasses over the counter, with results well known to every oculist, but the patients at this clinic secured the services of an expert oculist and glasses at a total cost often probably less than they would have had

to pay a business firm that prescribes and fitsglasses without expert service.

The basis on which the surgeons were paid is not stated, but they received \$939, while the fees amounted to \$952.75, so it would seem practicable simply to turn these fees over to the surgeons, or to make an equitable division so as to cover any deficit in the running expense of such a clinic, for it is doubtful if the profit from sales of medicines and glasses would meet all expenses if account was taken of the overhead charges, or rent. The estimated cost of light and heat was \$119, salaries amounted to \$288.70, instruments, printing, and stationery cost \$33.85. The Boston Dispensary evidently carried the overhead charges itself, and furnished gratis most of the instruments used, two very important items in estimating the expense. It is certainly a question whether the fees were not made too small to make the clinic truly self supporting; many of the wage earners could easily pay double the amount charged, although unable to pay the oculist's usual fee, and a sliding scale could be adopted, if needed. With an equitable division of the fees between the surgeons and the overhead charges, it seems reasonable to believe that such a clinic might really be self supporting.

This criticism is not made for the purpose of suggesting to large, well established hospitals how to add a considerable sum to their incomes, but to indicate how small communities may perhaps run self-supporting clinics for the benefit of the great number who dislike to ask for medical charity, and yet are not able to pay an expert's fees. The same clinic would naturally furnish free treatment to the very poor, so two classes of people would be served at the same time.—Editorial in the New York Medical Journal.

Garlic in Tuberculosis.

American physicians are experimenting with garlic as a possible cure for tuberculosis. According to reports, a Dublin doctor has met with considerable success in its use, and has published a book upon it. It is now being tried in the Metropolitan Hospital in New York. It is said that there is little tuberculosis in Italy, where garlic chewing is a national habit, and that in this country it is the Italian children, who have given up chewing garlic, who succumb to tuberculosis. Garlic contains a chemical substance called allyl sulphide in the percentage of two drops to a teaspoonful of juice, which is much

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stronger than the amount of the same chemical found in onions and shallots. It is this drug, it is claimed, which destroys the tubercle bacilli. Garlic juice is said to act very quickly upon tuberculosis of the throat, and application of the juice to lupus has excellent results, unless the disease is of long standing.—New Orleans Medical and Surgical Journal.

The Medical Treatment of Hypertrophic Pyloric Stenosis of Infants.

Exchaquet outlines the following measures recommended by Ibrahim, as follows: Administer a food both easily digested and nourishing: milk modified with cream or a malted cereal, butter-milk, or sweetened skimmed milk. Use a small quantity of food at a time. Lavage rid the stomach of residues that favor vomiting and other dyspeptic disturbances. The spasmodic element may be combatted by the application of hot compresses and by the administration of valerian, opium, and atropine. The general strength may be sustained by the use of saline and nutrient enemata or by hypodermoclysis. Whenever possible the pylorus should be stretched by means of the method of pyloric intubation devised by Hess.—Revue Medicale de la Suisse Romande.

At Last.

As most of our members will have seen from the newspapers the Attorney General has decided to file suit against Dr. J. N. McCormack personally, instead of the members, past and present, of the State Board of Health, as has long been threatened and expected, for the sum of \$18,739, which it is alleged was spent in technical violation of the health and medical laws since the Board was organized 36 years ago. This whole matter has been so thoroughly threshed out during the last two sessions of the General Assembly, and both the profession and people are so fully informed on the subject, that it seems hardly necessary to say that, acting for his associates on the Board, dead and living, and for a profession he is proud to represent, Dr. J. N. McCormack will present itemized statements and consecutively numbered vouchers, and ledgers, properly audited and certified, year by year, for each year since these laws were enacted—a record which can hardly be equalled by any other branch of the State Government. Dr. McCormack seconded the motion last winter instructing that the suit be brought and it will not be his fault if it is not tried at the next term of the court, and he and the Board and their friends, which includes nearly every reputable physician in Kentucky, confidently expect it to be shown from the accurately kept and carefully preserved records, not only that all of these affairs have been wisely and economically administered, and that the people have had the full benefit of every dollar expended but that, acting under the advice of its able lawyers and a long line of worthy auditors, every technical provision of law has been rigidly observed.—Kentucky Medical Journal.

Treatment of Tuberculosis of the Bladder.

Bruni notes that Casper regards instillations of corrosive sublimate in a strength of 1 to 10,000 gradually increased to 1 to 2,000 as the best local remedy in this condition. The painful reaction following these instillations frequently demands the use of opiates. The author has had little success with the above method of treatment and prefers the use of gomenol, which is particularly advantageous because of its analgesic power. It is used in a 10 per cent. strength mixed with a bland oil and may be instilled daily. Another good remedy is guaiacol, which is a powerful analgesic and is instilled, as in the following formula:

℞ Iodoform, 1 gram,

Guaiacol, 5 grams,

Sterile olive oil, 100 grams.

It should be borne in mind that nitrate of silver, which is the best topical application in other forms of cystitis, is injurious in the tuberculous variety.—*Riforma Medica*.

Multiple Idiopathic Pigment Sarcoma Treated by X-Rays.

Sequeira reports the case of a male patient suffering from Kaposi's so-called multiple idiopathic pigment sarcoma, to show the remarkable improvement under X-ray treatment. The case was an early one, characterized chiefly by chronic purplish infiltration of the feet and ankles, and to a less degree of the wrists and backs of the hands. There were a few small nodules upon the generally infiltrated areas. The X-ray treatment was begun in August and was repeated at somewhat irregular intervals. In all, each part affected received about 50 H units, the applications being made through a screen of aluminum 0.2 mm. thick. There had been no reaction. The condition of the infected areas was now completely changed, the skin was of normal consistence, and the purplish tint had gone. Beyond some brownish staining of the parts there was no evidence of the disease.—*Proceedings of the Royal Society of Medicine*.

Tuberculosis, Emetine in Pulmonary.

While emetine probably has no effect on the tubercle bacillus, the author considers it a valuable addition to the measures available for reducing congestive conditions in the lungs. It is, therefore, both a preventive and curative agent in tuberculosis. The author uses ampoules containing $\frac{1}{2}$ grain of emetine in 15 minims of distilled water. Diluting this in 4 parts of water, 1 minim equals 0.04 cg., and the author has come to consider 4 minims of this dilution a suitable dose to give for the purpose of controlling expectoration or lessening congestion.

Some of the cases of hemorrhage in which the author used emetine had only slight and occasional bleeding, but copious expectoration. Not only did all traces of blood disappear from the sputum itself decreased or ceased. This observation induced the author to employ the drug in some cases of copious expectoration alone, and the results were sufficient to justify announcement to the general profession. The drug was used in over 40 cases.—*Raeburn British Medical Journal*.

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Treatment of Wounds of the Thoracic Duct.—Dobbertin (Zentralblatt für Chirurgie) refers to the difficulties often experienced in arresting the flow of chyle from the thoracic duct to the exterior when this canal is injured, generally in the course of operative removal of the supraclavicular lymph nodes. The chylorrhea, unless checked, results in rapid exhaustion of the patient. In a case of lymphosarcoma of the neck recently operated in by Dobbertin, closure of the wound, with drainage, was effected, but on the fifth day an abundant and persistent flow of chyle suddenly began, which packing and skin suturing failed to arrest. The patient being moribund, it was decided to reopen the wound. Five wads of cotton from which the normal grease had not been removed, and which was consequently nonabsorbent, were packed, after sterilization, into the cavity from which chyle was seen issuing. These wads were of walnut size, and were held in by tightly suturing the overlying fascia with Lembert sutures of catgut, and the skin with like sutures of silk. The escape of lymph ceased at once, tissue union took place without any accompanying fever, and on the

tenth day the cotton wads were removed through a small incision at the lower angle of the wound. Complete recovery soon followed.

Polycythemia Rubra.

MacCormac reports the case of a male aged 64 years, in whose family history there was nothing of importance. His health had generally been excellent. No previous illness. The present condition began six years ago, when his friends told him his face looked flushed and blue. About this time he had his first attack of articular gout; since then he has had several other attacks. He has also had sciatica. The rubicund condition of his face and extremities had become more marked. The small blood vessels could be seen very distinctly on his face and there was a general reddish blue color which was also well marked on the mucous membranes. Apart from a feeling of lassitude his general condition was fairly good. The spleen was very considerably enlarged. Blood count: Red blood corpuscles, 8,500,000; white blood corpuscles, 9000; hemoglobin, 130 per cent.—Proceedings of the Royal Society of Medicine.

A New Sign of Syphilis.

One of the earliest signs of constitutional syphilis is a diminished bone-conduction of sound, in spite of otherwise normal hearing. An apparently healthy man, with normal hearing but impaired bone-conduction, should be suspected of being syphilitic. A tuning-fork is struck and placed on the patient's mastoid process. When he no longer hears it, the fork is placed upon the physician's mastoid region. If the fork is still audible to the physician, the test is positive, provided the patient's hearing was otherwise acute. The reaction is apparently due to increased intracranial pressure. It disappears for a few days after lumbar puncture and is positive not only in syphilis but in brain tumors, hydrocephalus, epilepsy and tetany.—Canadian Practitioner and review.

The Treatment of Bronchial Asthma.

Martin says that one should first get the patient into a comfortable position as possible, either in bed or sitting in an armchair. All the windows should be opened and all close-fitting clothing especially about the neck, should be loosened. Three grains of calomel with soda should be administered. It is well to burn in the room a powder of lobelia and stramonium with nitrate of potassium. Hot compresses to the chest and back and alternate (hot and cold) hand and foot baths are useful. In the majority of cases these measures calm be necessary to inject hypodermically 1-4 grain of morphine with 1-120 grain of atropine to lessen the severity of the dyspnea. The morphine acts as a nerve sedative, shortening the paroxysm. The atropine diminishes bronchial secretion, probably by virtue of its sedative, vagal influence. Later a wet pack should be applied and should be renewed at the end of two hours. The action of the calomel should be aided by a large soapsuds enema. During the first twenty-four hours the author gives nothing but weak orange or lemon water, and keeps the patient resting until the chest has been relieved of its superabundant secretion. The drug par excellence for this is potassium iodide. For the first week the author gives 5-grain doses every four hours in a mixture containing tincture of stramonium, tolu, and extract of liquorice. At the end of the seventh day the potassium iodide is given three times a day and is kept up for three months, this time in a mixture containing sodium bicarbonate, powdered rhubarb, magnesium carbonate, stramon-

ium, creosote, and peppermint water. After three months this medicine is to be taken at bedtime more or less for two years, and during the day the patient should receive a tonic containing dilute hydrochloric acid, arsenic, and strychnine. He is instructed to eat slowly, and if not hungry to partake only of distilled water or fresh fruit juices until hunger reappears; and to avoid table salt, except a very little in the cooking of foods. It may be necessary to establish free nasal breathing and to calm respiration by general massage.—Clinical Journal London.

Extradural Hemorrhage Causing Aphasia.

Cope reports the case of a male, aged 29, who was struck over the left temple on August 4, 1913. He was unconscious for a time and had not regained full consciousness when he came under the author's care on August 5. On admission his pulse was 50 and respiration 20 and he was drowsy but could be roused. The knee-jerks were slightly exaggerated and the pupils were equal and reacted normally. There was slight swelling and

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bruising over the site of injury. In the absence of localizing symptoms no operation was considered advisable. For some days the condition improved, so that he could answer questions sensibly, but it was noticeable that after giving a sensibly answer his speech would tail off into a jumble of disconnected nonsense. Nine days after admission his right pupil became larger than the left and early optic neuritis was found. The pulse still remained 50 to the minute. Operation was undertaken on August 15. The skull was trephined over the anterior branch of the left middle meningeal artery. An ounce or more of old-blood-clot was found outside the dura, extending down to the skull base, and two depressed pieces of bone were removed. The dura was not opened. No drainage. Recovery was very rapid after operation. Speech was soon quite perfect and pulse normal. The patient was discharged from hospital just a fortnight after operation.—Proceedings of the Royal Society of Medicine.

The Plague in New Orleans.

On October 1 the twenty-eight case of plague died, and on October 19, for the third time since the disease was identified in New Orleans, the city was declared free of human plague. Two cases occurred later. In the total of thirty cases recognized, eight in all have died, a mortality of about 25 per cent. There has been no official publication of the plague cases in detail, with the character of the disease stated, but for the largest part the cases have been bubonic, with the femoral glands involved. The prompt effect of large doses of serum have been remarked, and the recovery of so large a proportion of cases is attributed to the use and manner of using the serum.

More and more rat-proofing is being done every day, and a thorough clean-up has been accomplished already, but it is projected to do it again, and yet again.

The distribution of rodent plague is still practically within the limits of the district dubbed "infected" by the health officials, with a wide dissemination of foci. Prompt measures of fumigation, deratization, and rat-proofing are applied to the residence of building in which or on the premises of which an infected rat is found.

The *Mus norvegicus* has been found in large numbers, *Mus musculus* in about 25 per cent., the *Mus rattus* in about 8 to 10 per cent., and the *Mus alexandrinus* in less than 1 per cent. of the rodents

examined up to October 12, numbering over 112,000. In the 181 rodents infected with plague, 172 were *Mus norvegicus*, 6 *M. rattus*, and 3 *M. alexandrinus*.

The rat-proofing ordinances are being regularly enforced, and throughout the city of New Orleans the work is going on.—New Orleans Medical and Surgical Journal.

Polycythemia Rubra.

MacCormac reports the case of a male aged 64 years, in whose family history there was nothing of importance. His health had generally been excellent. No previous illness. The present condition began six years ago, when his friends told him his face looked flushed and blue. About this time he had his first attack of articular gout; since then he has had several other attacks. He has also had sciatica. The rubicund condition of his face and extremities had become more marked. The small blood vessels could be seen very distinctly on his face and there was a general reddish blue color which was also well marked on the mucous membranes. Apart from a feeling of lassitude his general condition was fairly good. The spleen was very considerably enlarged. Blood count: Red blood corpuscles, 8,500,000; white blood corpuscles, 9000; hemoglobin, 130 per cent.—Proceedings of the Royal Society of Medicine.

The Problem of the Ductless Glands.

How the tissues are affected by the secretion of the thyroid is an enigma. But the fact is certain. For the adrenal cortex even so much as that cannot be said. There is only the conjecture that this fatty substance is essential to a man's strength and manhood. To the Australian or "black fellow doctors" the fat above the kidney was magic. If by incantations it could be removed from an enemy as he slept, the victim would surely lose his strength and die. We know as much, that there is no warm-blooded life without these glands.—British Medical Journal.

The Avitaminoses and Their Treatment.

Stassano defines the avitaminoses as diseases resulting from a deficiency of vitamins in the diet. The vitamins are complex crystalline substances belonging to a chemical group hitherto unknown. The nitrogen is not combined in the amine radicle and can be extracted only in part by the Kjeldahl method. The characteristic syndromes of the

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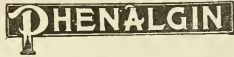
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avitaminoses are classified as follows: (1) The syndrome of degeneration of nerves with paralyses and contractures; (2) the cardiac syndrome with dilatation of the right heart accompanied by dyspnea, cyanosis, and oliguria; and (3) the syndrome of anasarca, hydropericardium, hydrothorax, and ascites; all of these three syndromes belong to the group of cases properly called beriberi. (4) The classical syndrome of scorbutus. (5) The syndrome of pellagra. In all of the above conditions the following articles of diet which are rich in vitamins have been found to be of curative as well as of prophylactic value; human milk; fresh cow's milk, butter, cheese, yolk of egg, beef juice, fresh tomatoes, fresh legumes and soups containing them, fresh fruits or their juices, the sauce of stewed fruits, whole corn or wheat bread, unpolished rice, slightly roasted beef, fresh yeast, extracts and preparations of yeast, and codliver oil.—*La Quinzaine Therapeutique*.

The Reaction of Morelli in Tuberculous Pleural Exudates.

Zannini says that this reaction, which is similar to the Runeberg nitric acid test, is based upon the fact that mercury combines with different types of albumin and gives rise to corresponding metallic albuminates. The technique of the reaction is a simple one. A cylindrical glass vessel is filled with a saturated aqueous solution of corrosive sublimate. Into this there are introduced slowly three or four drops of the liquid to be examined. If this is an exudate there forms on the surface of the solution a yellowish annular coagulum of albuminate of mercury which adheres to the side of the glass. If the liquid to be examined is a transudate the coagulum falls to the bottom of the vessel in the form of fine flocculi. This is the negative reaction which occurs constantly in the case of tuberculous pleural exudates.—*Rivista Ospedaliera*.

Case of Possible Insufficiency of Endocrine Glands.

Crookshank mentions the case of an apathetic and flaccid male infant aged 32 months who did not speak and seemed to have extremely little initiative. Some of the features were suggestive of mongolism; there was a marked Hapsburg lip. The vault of the nasopharynx was very small and the respiratory system generally poorly developed. The upper part of the trunk and the arms were

relatively less developed than the belly, which was protuberant, and the legs, which were large and shapeless. There was a marked dimple above the anus. For some weeks the patient was given thyroid and thymus tablets and improved. It was thought that the child had in addition to some degree of mongolism, some pituitary as well as genital insufficiency.—*Proceedings of the Royal Society of Medicine*.

Vaso-Motor Derangements.

The part played by the vaso-motor system in countless diseases is at last thoroughly recognized. As a consequence, circulatory disorders are among the most functional ailments that the modern physician is called upon to correct. Various heart tonics and stimulants are usually employed, but the effect of these is rarely more than temporary. To re-establish a circulatory equilibrium that offers real and substantial relief from the distressing symptoms that call most insistently for treatment requires a systematic building up of the whole body. Experience has shown that no remedy at the command of the profession is more serviceable in this direction than Gray's Glycerine Tonic Comp.

For nearly 20 years this standard tonic has filled an important place in the armamentarium of the country's leading physicians. Its therapeutic efficiency in restoring systemic vitality and thus overcoming functional disorders of the vaso-motor or circulatory system is not the least of the qualities that account for its widespread use. The results, however, that can be accomplished in many cases of cardiac weakness have led many physicians to employ it almost as a routine remedy at the first sign of an embarrassed or flagging circulation.

"Whatever be the nature of rheumatism and gout, every practical physician realize that they are amenable to treatment and that it is a matter of as much importance to open the doors by which the poison goes out as to close those doors by which it comes in. Hence prompt and thorough elimination must be obtained through the liver, the kidneys, the bowels and the skin."

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Pain: Its Relief.

If ever direct methods are needed it is in the relief of pain. And the application of a direct method in pain embraces, of course, the administration of a reliable and effective anodyne—and such an agent should be free, to the greatest extent, from evil effects.

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Every now and then one is forcibly reminded of the fact that the pharmaceutical market of today contains many so-called therapeutic agents of doubtful medicinal value—agents of indefinite and varying potency. The point was well brought out, not so very long ago, by a certain chemist who purchased in the open market ten samples of tincture of opium in which the contents of morphine varied from 2.7 to 22.8 per cent. Of three tinctures of aconite which he examined, one was found to contain 9 per cent. more of aconitine than the standard

required, and another 20 per cent. less. Two specimens of fluid extract of the same drug contained 18.5 per cent. and 25.5 per cent. more, respectively, of the alkaloid than is officially required. Samples of belladonna showed 11.5 per cent. less of mydriatic in the fluid extract of the root, and 17 per cent. more in the tincture of the leaves. Some tinctures and fluid extracts of nuxvomica revealed an excess of strychnine—in one case of 19 per cent.

The foregoing facts are called to mind by an announcement which is appearing in medical journals over the signature of Parke, Davis & Co., bearing the title, "Fluid Extracts and Tinctures of Definite Potency," and opening with this significant question: "When writing a prescription for a fluid extract or tincture, what assurance have you that the product dispensed will be medicinally efficient?—that it will be active, yet not too active?—that it will produce the therapeutic results that you hope for and expect?"

It is well known that Parke, Davis and Co. are authorities upon the subject of standardization, chemical and physiological, and it may be confidently asserted that the practitioner of medicine who reads and ponders what is said in the announcement referred to will find that his time has been well expended. The physician's obligation to his patient, it should be remembered, does not cease with the writing of a prescription. There remains the further duty to assure himself that trustworthy products are used in compounding that prescription. When he prescribes a fluid extract or tincture the physician owes it to his patient to specify the brand—the brand of a reliable manufacturer.

The Element of Uncertainty.

In the treatment of disease the element of uncertainty with special reference to individual idiosyncrasy, must always be considered, but the element of uncertainty as to the therapeutic action of a remedy can be eliminated providing ordinary care is exercised in selecting drugs or remedies which are not inert and have proven their efficiency.

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The Bowels Are Secretory Organs.

It is the failure of the secretory function of the bowel, together with a poor bile secretion, which, in nine cases out of ten, is responsible for constipation.

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Concerning Cathartics.

To the layman's cathartic is simply a cathartic, and nothing more. One thing is as good as another, as long as it "moves the bowels." To the physicians there is a vast difference between "moving the bowels," and inducing normal bowel action.

For years Strychnine was the stock ingredient of cathartics, for the purpose of stimulating the muscle to peristalsis. But nowadays we realize that Strychnine more often inhibits peristalsis by overstimulation, and that the best stimulant of intestinal muscles is the intestinal secretions.

Pil. Cascara Comp. Robins contains no Strychnine to force the musculature, nor Belladonna to inhibit the secretions. On the contrary it stimulates the flow of secretions and normalizes peristalsis. It is, in fact, a normal Cathartic.

A Case of Ectopia Vesicae in Which the Ureters Were Grafted Successfully Into the Rectum.

Simpson (British Medical Journal) mentions the case of a girl aged eight years,

successfully treated. Under a general anesthetic he dissected up the posterior bladder wall from the peritoneum above and triangular ligament below. A catheter was inserted into each ureter, which was cleared for about two inches; the redundant portion of the bladder was removed except just around the ureters. Simpson next proceeded to divide some fibrous tissue in the position of the hymen admitting the finger into the vagina, and then divided the triangular ligament, permitting the lower end of the ureters to be turned back into the vagina in close proximity to the anterior rectal wall. With a finger in the rectum an opening was made through the posterior vaginal and anterior rectal walls, and through this the catheters and ureters were placed; the free edges of the rectovaginal incision were sutured to the sides of the ureters, the triangular ligament, perineum, and abdominal wounds were respectively drawn together with catgut. Urine was collected in a receptacle for seven days from the two catheters which protruded from the anus; they were then withdrawn, and the patient made an uninterrupted recovery.

Chronic General Periodonitis.

Colyer (London Practitioner) makes the statement that clinically this disease, known to us as pyorrhoea alveolaris, starts either between the posterior teeth or around the anterior teeth. In the former situation, the stagnation is principally produced by lodgment of food, while in the latter, it is the direct result of mouth breathing. The doctor says that a marginal gingivitis around the anterior teeth, more especially the lower incisors, is diagnostic of mouth breathing, and that this gingivitis, unless cured by making the patient a nose breather, must lead to periodontal disease. The most virulent types of periodontal disease are usually to be found in mouth breathers. Under normal conditions, microorganisms are always present in the mouth, but these are cared for by the defences of the body. In septic conditions of the mouth the number of organisms is increased and the defences of the body at times are unable to cope with the attack, so that pathological processes may be started in the body. Infection may also come through the bone. With regard to treatment the following points need to be taken into consideration: 1. The important part played by mouth breathing, which renders local and other remedies of little avail. 2. The more thoroughly the function of mastication is carried out, the greater will be the resistance of the tissues. 3. The recuperative powers of the patient are

indicated by the condition of the alveolar process. The presence of sclerosis of bone may be taken as a sign of resistance. 4. The condition of the teeth may be taken as an index of the amount of rarefying osteitis. Cases favorable for treatment are those in which the pockets around the teeth are shallow, in which the arch is well developed, the function of mastication efficiently performed. Treatment resolves itself into a question of drainage. The more the thoroughly the pockets can be cleansed, the greater the chance of staying the progress of the disease. The measures he adopts are thorough scaling, massage of the gum, regular irrigation by the patient of the spaces around the teeth, for which hydrogen peroxide is useful, but the main thing is to keep the spaces clear and clean, and the occasional application of tincture of iodine to the pockets. Thorough cleanliness of the pockets seems to be the keynote. Other cases that are not favorable for treatment are grouped under two headings, those unassociated with apparent symptoms, and those in which a causal relationship to other diseases has been established. In the former class, the discharge from the tissues may be kept in check by efficient irrigation, but the patient has a potential source of infection which may become active at any time, and the greater the destruction of the alveolar process the less is the chance of making comfortable and efficient dentures, so it is questionable whether it is not best to remove the teeth. In the second class of cases, the removal of all the affected teeth is the right line of treatment and the only safe course. The doctor mentions some cases of arthritis and of suspected tuberculosis that were dependent on this disease.

Hysterical Brachial Monoplegia Following Electrical Shock.

Stewart reports the case of a patient who was treated for this condition for two and a half months by various forms of electricity and numerous psychical and sensory stimuli, but without success. On the contrary, the total flaccid paralysis of the left upper limb persisted and the anesthesia advanced proximally on the trunk so as to include the outer part of the pectoral region in front and of the scapular region behind. Suggestive treatment by attempted hypnosis was assiduously carried out for a number of weeks. No improvement having resulted after two and a half months of hospital treatment, it was decided before discharging the patient to try the effect of administering a general anesthetic in the hope of loosening the hysterical obsession during the stage of delirium preceeding general

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anesthesia. Accordingly the patient was placed on a couch with the healthy right arm fixed to his trunk by means of a bandage. Ether and nitrous oxide were then administered, freely mixed with air. Within a few moments the patient began to make purposive movements with the "paralyzed" left arm and these soon amounted to violent fighting movements, in which he endeavored to tear the anesthesia mask from his face. While the patient was in this excited condition numerous suggestions were made to him that he should move his paralyzed arm in various directions, these suggestions being accompanied by various painful stimuli—e.g. twisting the ear, pressing the supraorbital notch, etc. During this stage it was also suggested that his unaffected right arm should become temporarily analgesic to pin-pricks, and this duly occurred. It was then suggested to him that all his sensory and motor symptoms should disappear. On recovery from the effects of the anesthetic patient had lost his previous anesthesia and was able to move both upper limbs in the normal fashion. He has since remained well. The paralysis of the left upper limb has lasted over eleven months from the time of the original electric shock.—Proceedings of Royal Society of Medicine.

bund. The haemoglobin was 15 to 20 per cent. and the red cells numbered only one million. Oedema, retinal haemorrhages, slight jaundice, urobilinuria, dyspnoea, and partial loss of consciousness were observed. The blood was characteristic of pernicious anaemia. As the patient was too weak for an operation she was first treated with

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Splenectomy in Pernicious Anaemia.

Huber (Berl. klin. Woch.) mentions that extirpation of the spleen in health can usually be effected without risk, but that the operation is contraindicated in leukaemia. Splenectomy stimulates the production of certain elements of the blood, and it has therefore been concluded that the spleen inhibits the action of the bone marrow. Splenectomy has frequently improved or cured haemolytic jaundice and splenic anaemia, and this encouraged the author to extirpate the spleen in the following case. A married woman, aged 34, had contracted syphilis four years earlier, and had been treated with mercury and salvarsan. She was admitted to hospital mori-

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small intragluteal injections of defibrinated blood. This effected temporary improvement, which was followed in a few weeks by high fever and petechiae in the neck and chest. As a last resort the spleen was extirpated by an operation lasting twenty minutes. The spleen was three times the normal size, largely owing to engorgement with blood, 150c.cm. of which escaped when the ligatures on the spleen were removed. The arteries of the spleen ought therefore to be ligatured early in the operation. The microscope showed marked myeloid changes, numerous myelocytes, eosinophile leucocytes, and nucleated erythrocytes in the spleen. The blood, on the other hand, showed no eosinophilia. She stood the operation well, and improved rapidly. After five weeks the haemoglobin had risen to 50 per cent. and the erythrocytes to 25 million. The oedema jaundice, urobilinuria, and retinal haemorrhages had disappeared, and the temperature had fallen almost to normal. In spite of the disappearance of the oedema the weight had risen from 54 to 56.7 kilos. Ten days later a slow relapse was checked by injections of defibrinated blood. More than three months after the operation the patient could walk without difficulty, but the author is guarded in his prognosis. Even better results have been obtained by Eppinger and others who have treated pernicious anaemia by extirpation of the spleen. It is evidently injurious in pernicious anaemia because of its haemolytic activity and its inhibitory action on the production by the bone marrow of mature erythrocytes.

Treatment of Pulmonary Edema.

Talley points out that the aim should be to equalize the work of the two ventricles. The pulse tension gives the most important clue to treatment. If there is hypertension glyceryl trinitrate, 1-100 to 1-50 grain, is indicated. Dry cupping of the entire chest should be practised; and if the condition is severe venesection should be performed, a small amount of blood being withdrawn, but as much as 400 to 600 c.c. may be removed. It may be advisable to inject with the glyceryl trinitrate morphine sulphate, 1-8 to 1-4 grain. If there is much cyanosis oxygen is useful. Atropine, 1-100 to 1-50 grain, is commonly recommended in acute pulmonary edema. The chief objection to its use has been its marked vasomotor stimulant influence, with consequent rise in blood-pressure. This effect is avoided if a large dose, 1-50 grain, is used. In patients with rapid feeble pulse and evident hypotension quick diffusible stimulants as aromatic spirit of ammonia, whiskey, cit-

rated caffeine, camphor, and even digitalis hypodermically are to be used. In this condition atropine has not even a theoretical contraindication. Morphine, oxygen, and the dry cupping should be used. As regards suprarenal extract, Kinnicutt and Forchheimer reported that it acted favorably, but Meltzer and others have condemned its use, inasmuch as in experimental work suprarenal extract produces acute pulmonary edema. In view of these conflicting results it would seem advisable in acute pulmonary edema to use suprarenal extract only as a last resort. Haven Emerson has recommended the use of artificial respiration if there is cardiac insufficiency. In the type of pulmonary edema associated with subcutaneous edema heart stimulants and diuretics are usually indicated. In the chronic and recurrent from the salt-free diet should be given a trial.—Musser and Kelly: "Handbook of Practical Treatment."

Hypothyroidism in Children.

Dick, says that a considerable proportion of children who are subjected to operation for enlarged tonsils and adenoids show symptoms of rickets. These children are frequently mentally dull, with dry rough skin, nasal or bronchial catarrh, sluggish circulation, coarse hair, defective speech and soft bones. The effect on the teeth is usually shown in the incisors which are jagged with defect in the enamel and an exposed edge of dentine. These are symptoms usually associated with deficiency of thyroid secretion. In the disturbance to the mutual relations of the thyroid, thymus and parathyroid glands we have the probable explanation of the cause of rickets. The older theory that a breast-fed child could not be rickety, the author holds, is unfounded, for in his experiences in school work he has frequently encountered just such cases. The doctor thinks that the mothers of these childrens have lived in want and under unhygienic conditions and that during lactation they suffered from deficient thyroid secretion. The effects of this condition reacts detrimentally upon the children. The poor quality of the mother's milk is not alone sufficient to explain the occurrence of rickets in the children, though it undoubtedly is a powerful contributing factor. The lack of proper food and the unhygienic surroundings in later years is another factor. The fact that the children usually become more robust after reaching the age of seven years is probably due to their being permitted greater liberty in running about out-of-doors.—London Lancet.

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The Arterial Supply of The Rectum And Pelvic Colon.—Drummond (British Journal of Surgery) illustrates both by pictures and description the rectosigmoid anastomosis, and the anastomosis between the superior and middle hemorrhoidal arteries. The injection used was barium sulphate and almond oil pumped with a strong syringe into the inferior mesenteric artery, cut off at its origin from the aorta. It was found that if the left colic artery was not tied, the injection in most instances would travel up and fill the vessels given off by the superior mesenteric. When a ligature had been applied to the superior mesenteric artery at its origin from the aorta, it was possible to inject, through the inferior mesenteric, the whole of the large and small intestine area up to the duodenum.

Rubesch had already found that the injection of the whole could be brought about in the opposite direction by injecting through the superior mesenteric artery. This is an interesting anatomical fact, but clinically considered it seems unlikely that a collateral circulation could be provided quickly enough to prevent gangrene after ligation of the superior mesenteric artery.

The inferior mesenteric artery is given off from the abdominal aorta about $1\frac{1}{2}$ to 2 inches from its lower end. According to Jamieson and Dobson, it arises from that vessel under cover of the duodenum. In carrying out these injections, the author frequently found in children, and occasionally in adults, where there was no ptosis of the duodenum, that the inferior mesenteric artery originated from the abdominal aorta half an inch, or sometimes one inch, below the lower border of the duodenum.

About an inch from its origin the trunk gives off the left colic artery, which divides into an ascending and descending branch.

The point at which the artery divides into its two main branches is a variable one. The upper branch anastomoses with a branch from the middle colic, and the lower one anastomoses with the first of the sigmoid branches, sending a vessel upwards in addition, as a rule close to the bowel, to join its upper branch.

A large loop is therefore formed between the upper and lower branches of the left colic artery.

The sigmoid arteries from the inferior mesenteric supply the lowest part of the descending colon and the iliac and pelvic colons by a series of loops which anastomose above with the lower branch of the

left colic, and below with the main trunk of the superior hemorrhoidal artery.

These sigmoid arteries are given off in an erratic manner. Of 20 cases injected, the first of the sigmoid branches was given off from the left colic, or a branch of it, 11 times; in the remainder of the cases, nine in number, it sprang from the main trunk of the inferior mesenteric artery.

The remaining two or three branches arise from the main trunk of the inferior mesenteric artery, the arcades which they form anastomosing freely with each other. The lowest sigmoid branch does not form an anastomosis with the superior hemorrhoidal artery in this arcade fashion.

The superior hemorrhoidal artery forms no anastomosing arcade, but is, so to speak, a terminal artery.

The arterial anastomosis at this point, the rectosigmoid junction, is of interest on account of the important bearing it has on operations devised to remove the lower colon and rectum.

Hartman found that, after operations by the sacral route upon carcinomata situated high up in the rectum, gangrene occasionally followed in the portion of the bowel which had been freed to permit of the establishment of a perineal or sacral anus.

De Dietrichs, one of many who have made post-mortem investigations on this point, showed that by ligation of the inferior mesenteric artery above the origin of the last sigmoid branch, the circulation of the rectum was not affected; but ligation of the artery (inferior mesenteric) below the last sigmoid branch arrested the circulation to the rectum, and gangrene in the living subject would be inevitable.

Hartman states that if the operator, after excision of the rectum, wishes to bring the bowel, with a satisfactory circulation maintained, down to the level of the skin of the perineum without traction, it is necessary to avoid cutting the superior hemorrhoidal arteries where they are necessarily divided when working exclusively from the perineum. A ligature must be placed high up on the common trunk of these arteries, above the last anastomotic loop, which is to be found a little lower than the level of the promontory of the sacrum. To do this the abdomen must be opened. Hartman himself was the first to open the abdomen and tie the superior hemorrhoidal artery to check hemorrhage and to allow of an easier mobilization of the rectum. Sudeck, however, was the first to point out the importance of an abdominal

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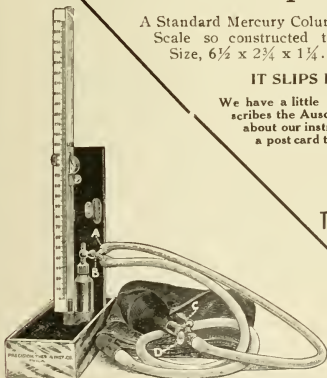
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incision in order to find the exact position of this anastomosis, which he called the C. P. (critical point).

The superior hemorrhoidal artery divides—as a rule, at the upper end of the

rectum or a little lower—into two main branches which spread out on the lateral aspects and front of the bowel. These two main trunks soon give off numerous small branches which form a free anasto-

mosis around the ampulla of the rectum, and which can easily be traced down to the upper end of the anal canal. On reaching the middle of the ampulla the branches perforate the muscular coat and come to lie in relation to the inner coat of the bowel.

The anastomosis between the superior and middle hemorrhoidal arteries is shown to be a variable one. In only three out of twelve subjects could the middle hemorrhoidal artery be clearly shown. In all the specimens the tissue containing this artery was dissected off from the bowel, so that infection could easily make itself visible on the X-ray picture if it was of sufficient size. From these specimens we may conclude that in many cases the middle hemorrhoidal has not, as the text-books lead one to suppose, a free anastomosis with the superior hemorrhoidal artery.

In only two of the specimens could the inferior hemorrhoidal artery be seen—suggesting that this artery, like the middle hemorrhoidal, does not anastomose freely with the superior.

The anastomotic loop formed by the last sigmoid artery varies considerably in size and position, and in some cases may be absent.

Gangrene in the stump of the bowel brought down after high excision of the rectum by the sacral route may be due to (a) anatomical causes, or (b) tension sufficient to arrest the already handicapped circulation. It seems probable that tension is the more important of the two factors.

To insure that the inferior mesenteric artery is tied in a suitable situation—i. e., above the last sigmoid branch—it is necessary to open the abdomen. If the rectosigmoid loop is small, any attempt to draw down the bowel to the perineum is likely to result in gangrene, and permanent colostomy should be done.

In the abdominoperineal operation for excision of the rectum, it is safe to ligature the inferior mesenteric artery immediately below the point where the left colic artery is given off when a permanent colostomy is made.

If the bowel above is to be brought down to the anus after excision of the rectum by the abdominoperineal method, the most convenient place to ligature the inferior mesenteric artery is immediately below the first sigmoid branch, which is to be recognized by the large anastomotic loop it usually forms with the branch of the left colic artery.

Treatment of Heart Disease by Means of Physical Exercises And Co Baths.—Harris (Liverpool Medico-Chirurgical Journal) thinks that exercise is indicated in cases in which there is a good reserve power of the heart and the muscles of the body are badly developed, as is often met with in young people. Here exercise will sometimes work wonders.

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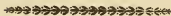
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